Safety Data Sheet

Document group:	06-8466-2	**Version number:**	12.01
Issue Date:	2020/10/20	**Supercedes Date:**	2019/04/17

This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

SECTION 1: Identification

1.1. Product identifier
3M FIRE BARRIER 2000+ PREMIUM SILICONE SEALANT

Product Identification Numbers
44-0029-8102-3 98-0400-5299-9 98-0400-5300-5 AT-0104-1885-6

1.2. Recommended use and restrictions on use

Intended Use
A FIRE STOPPING SEALANT FOR FIRE RATED WALL AND FLOOR PENETRATION AND JOINTS.

Specific Use
FIRE STOP MATERIAL

Restrictions on use
Not applicable

1.3. Supplier's details

Company:	3M Canada Company
Division:	Industrial Adhesives and Tapes Division
Address:	1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1
Telephone:	(800) 364-3577
Website:	www.3M.ca

1.4. Emergency telephone number
Medical Emergency Telephone:1-800-3M HELPS / 1-800-364-3577; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Not classified according to the Canadian Hazardous Products Regulation.

2.2. Label elements
Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable.

2.3. Other hazards
None known.

42% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	C.A.S. No.	% by Wt	Common Name
Calcium Carbonate	471-34-1	30 - 60	Carbonic acid calcium salt (1:1)
Polysiloxane	Trade Secret	30 - 60	Not Applicable
Dimethyl Siloxane, Dimethylvinylsiloxy-terminated	68083-19-2	5 - 10	Siloxanes and Silicones, di-Me, vinyl group-terminated
Methyltrimethoxysilane	1185-55-3	3 - 7	Silane, trimethoxymethyl-
Stearic Acid	57-11-4	1 - 5	Octadecanoic acid

Polysiloxane is a non-hazardous Trade Secret material according to WHMIS criteria.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

5.3. Special protective actions for fire-fighters
Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Observe precautions from other sections.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Keep out of reach of children. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

7.2. Conditions for safe storage including any incompatibilities
Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
STEARATES	57-11-4	ACGIH	TWA(respirable fraction):3 mg/m3;TWA(inhalable fraction):10 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure

Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
None required.

Skin/hand protection
No chemical protective gloves are required.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Specific Physical Form:	Paste
Colour	Gray
Odour	Alcohol
Odour threshold	*No Data Available*
pH	*Not Applicable*
Melting point/Freezing point	*No Data Available*
Boiling point	*Not Applicable*
Flash Point	No flash point
Evaporation rate	*No Data Available*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapour Pressure	*Not Applicable*
Viscosity/Kinematic Viscosity Viscosity/Kinematic Viscosity	*Not Applicable*
Density	1.34 g/cm3
Relative density	1.34 [*Ref Std:*WATER=1] [*Details:*CONDITIONS: @ 25C]
Water solubility	*No Data Available*
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*No Data Available*
Decomposition temperature	*No Data Available*
Viscosity/Kinematic Viscosity	*No Data Available*
Volatile Organic Compounds	
Percent volatile	
VOC Less H2O & Exempt Solvents	31 g/l
Molecular weight	*No Data Available*

Nanoparticles

This material does not contain nanoparticles.

SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

Substance	Condition
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Calcium Carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium Carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium Carbonate	Ingestion	Rat	LD50 6,450 mg/kg
Dimethyl Siloxane, Dimethylvinylsiloxy-terminated	Dermal	Rabbit	LD50 > 15,440 mg/kg
Dimethyl Siloxane, Dimethylvinylsiloxy-terminated	Ingestion	Rat	LD50 > 15,440 mg/kg
Stearic Acid	Dermal	Rabbit	LD50 > 2,000 mg/kg
Stearic Acid	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Dimethyl Siloxane, Dimethylvinylsiloxy-terminated	Rabbit	No significant irritation
Stearic Acid	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Dimethyl Siloxane, Dimethylvinylsiloxy-terminated	Rabbit	Mild irritant
Stearic Acid	Rabbit	No significant irritation

Skin Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Stearic Acid	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Stearic Acid	Ingestion	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes

Stearic Acid	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Stearic Acid	Ingestion	blood	Not classified	Rat	NOAEL Not available	6 weeks

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

No data available.

SECTION 13: Disposal considerations

13.1. Disposal methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility.

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA.

SECTION 16: Other information

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Health: 1 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification
Health: 1 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. The manufacturer MAKES NO WARRANTIES, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF PERFORMANCE, COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. User is responsible for determining whether the product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M Canada SDSs are available at www.3M.ca

Safety Data Sheet

This Safety Data Sheet has been prepared in accordance with the SS586 Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods.

Document group:	08-8510-3	**Version number:**	2.05
Issue Date:	06/05/2021	**Supersedes date:**	08/11/2018

SECTION 1: Identification

1.1. Product identifier
3M™ Fire Barrier Water Tight Sealant 1000 NS and 1003 SL

1.2. Recommended use and restrictions on use

Recommended use
Fire Protection, This product is a watertight sealant that will help control the spread of fire, smoke and noxious gases.

1.3. Supplier's details
Address: 3M Technologies (S) Pte Ltd,10 Ang Mo Kio Street 65, Singapore 569059
Telephone: +65 6450 8888
Website: www.3m.com.sg

1.4. Emergency telephone number
+65 6591 6888 (8.15am - 5.00pm, Monday - Friday)

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture
Serious Eye Damage/Irritation: Category 2A
Skin Sensitizer: Category 1.

2.2. Label elements
SIGNAL WORD
WARNING!

Symbols
Exclamation mark |

Pictograms

HAZARD STATEMENTS

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS

Prevention:

P280E	Wear protective gloves.

Response:

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Disposal:

P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines. This product may release methyl ethyl ketoxime (CAS 96-29-7) during curing and/or when exposed to water or humid air.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Calcium Carbonate	1317-65-3	15 - 40
Poly(Dimethylsiloxane)	63148-62-9	15 - 40
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	70131-67-8	15 - 40
Ketoxime Silane	22984-54-9	3 - 7
Silane, trimethoxyoctyl-, hydrolysis products with silica	7631-86-9	0.5 - 5.0
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	0.5 - 1.0
Octamethylcyclotetrasiloxane	556-67-2	<= 0.1
Quartz	14808-60-7	<= 0.1

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Allergic skin reaction (redness, swelling, blistering, and itching). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
Formaldehyde	During combustion.
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Oxides of nitrogen.	During combustion.

5.3. Special protective actions for fire-fighters
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators…) as required.

7.2. Conditions for safe storage including any incompatibilities
Store away from acids. Store away from strong bases. Store away from oxidising agents.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Calcium Carbonate	1317-65-3	Singapore PELs	TWA(8 hours):10 mg/m3	
Quartz	14808-60-7	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Quartz	14808-60-7	Singapore PELs	TWA(as respirable dust)(8 hours):0.1 mg/m3	
Octamethylcyclotetrasiloxane	556-67-2	AIHA	TWA:10 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
Singapore PELs : Singapore. Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect vented goggles.

Skin/hand protection
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an
Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Color	Gray
Odor	Low Odor
Odour threshold	*No data available.*
pH	*No data available.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	*Not applicable.*
Flash point	> 100 ºC [*Test Method:*Closed Cup]
Evaporation rate	*Not applicable.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	< 666.6 Pa [@ 25 ºC]
Vapor Density and/or Relative Vapor Density	>=1 [*Ref Std:*AIR=1]
Density	1.32 g/cm3
Relative density	1.31 - 1.33 [*Ref Std:*WATER=1]
Water solubility	Nil
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity/Kinematic Viscosity	*No data available.*
Volatile organic compounds (VOC)	<=4 % weight [*Test Method:*tested per EPA method 24]
VOC less H2O & exempt solvents	<=53 g/l [*Test Method:*tested per EPA method 24]
Molecular weight	*No data available.*

Nanoparticles
This material contains nanoparticles.

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3 Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.4 Conditions to avoid
Not determined

10.5 Incompatible materials
Strong acids.
Strong bases.
Strong oxidising agents.

10.6 Hazardous decomposition products

Substance	**Condition**
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact
Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact
Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion
Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:
Hematopoietic effects: Signs/symptoms may include generalised weakness, fatigue and alterations in numbers of circulating blood cells. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Additional information:
Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg

Calcium Carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium Carbonate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium Carbonate	Ingestion	Rat	LD50 6,450 mg/kg
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	Dermal	Rabbit	LD50 > 16,000 mg/kg
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	Ingestion	Rat	LD50 > 64,000 mg/kg
Poly(Dimethylsiloxane)	Dermal	Rabbit	LD50 > 19,400 mg/kg
Poly(Dimethylsiloxane)	Ingestion	Rat	LD50 > 17,000 mg/kg
Silane, trimethoxyoctyl-, hydrolysis products with silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silane, trimethoxyoctyl-, hydrolysis products with silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Ketoxime Silane	Dermal	Rat	LD50 > 2,000 mg/kg
Ketoxime Silane	Ingestion	Rat	LD50 2,260 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Inhalation-Dust/Mist (4 hours)	Rat	LC50 >1.49, <2.44 mg/l
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Ingestion	Rat	LD50 1,897 mg/kg
Quartz	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg
Octamethylcyclotetrasiloxane	Dermal	Rat	LD50 > 2,400 mg/kg
Octamethylcyclotetrasiloxane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 36 mg/l
Octamethylcyclotetrasiloxane	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Poly(Dimethylsiloxane)	Rabbit	No significant irritation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Rabbit	No significant irritation
Ketoxime Silane	Rabbit	No significant irritation
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Rabbit	Mild irritant
Octamethylcyclotetrasiloxane	Rabbit	Minimal irritation
Quartz	Professional judgement	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Calcium Carbonate	Rabbit	No significant irritation
Poly(Dimethylsiloxane)	Rabbit	No significant irritation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Rabbit	No significant irritation
Ketoxime Silane	Rabbit	Moderate irritant
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Rabbit	Corrosive
Octamethylcyclotetrasiloxane	Rabbit	No significant irritation

Sensitization:

Skin Sensitisation

Name	Species	Value
Silane, trimethoxyoctyl-, hydrolysis products with silica	Human and animal	Not classified
Ketoxime Silane	Guinea	Sensitising

	pig	
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Multiple animal species	Sensitising
Octamethylcyclotetrasiloxane	Human and animal	Not classified

Respiratory Sensitisation

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	In Vitro	Not mutagenic
Silane, trimethoxyoctyl-, hydrolysis products with silica	In Vitro	Not mutagenic
Ketoxime Silane	In Vitro	Not mutagenic
Octamethylcyclotetrasiloxane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Silane, trimethoxyoctyl-, hydrolysis products with silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Quartz	Inhalation	Human and animal	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silane, trimethoxyoctyl-, hydrolysis products with silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Ketoxime Silane	Ingestion	Not classified for female reproduction	Rat	NOAEL 250 mg/kg/day	premating into lactation
Ketoxime Silane	Ingestion	Not classified for male reproduction	Rat	NOAEL 250 mg/kg/day	28 days
Ketoxime Silane	Ingestion	Not classified for development	Rat	NOAEL 250 mg/kg/day	premating into lactation
Octamethylcyclotetrasiloxane	Inhalation	Not classified for male reproduction	Rat	NOAEL 8.5 mg/l	2 generation
Octamethylcyclotetrasiloxane	Ingestion	Toxic to female reproduction	Rabbit	NOAEL 50 mg/kg/day	during organogenesis
Octamethylcyclotetrasiloxane	Inhalation	Toxic to female reproduction	Rat	NOAEL 3.6 mg/l	2 generation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes
Ketoxime Silane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium Carbonate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
Silane, trimethoxyoctyl-, hydrolysis products with silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Ketoxime Silane	Ingestion	hematopoietic system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 10 mg/kg/day	28 days
Ketoxime Silane	Ingestion	endocrine system | liver | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 250 mg/kg/day	28 days
N-(3-(trimethoxysilyl)propyl)ethylenediamine	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.015 mg/l	90 days
Octamethylcyclotetrasiloxane	Dermal	hematopoietic system	Not classified	Rabbit	NOAEL 960 mg/kg/day	3 weeks
Octamethylcyclotetrasiloxane	Inhalation	liver	Not classified	Rat	NOAEL 8.5 mg/l	13 weeks
Octamethylcyclotetrasiloxane	Inhalation	endocrine system | immune system | kidney and/or bladder	Not classified	Rat	NOAEL 8.5 mg/l	2 generation
Octamethylcyclotetrasiloxane	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 8.5 mg/l	13 weeks
Octamethylcyclotetrasiloxane	Ingestion	liver	Not classified	Rat	NOAEL 1,600 mg/kg/day	2 weeks
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Calcium Carbonate	1317-65-3	Green algae	Estimated	72 hours	EC50	>100 mg/l
Calcium Carbonate	1317-65-3	Rainbow trout	Estimated	96 hours	LC50	>100 mg/l
Calcium Carbonate	1317-65-3	Water flea	Estimated	48 hours	EC50	>100 mg/l
Calcium Carbonate	1317-65-3	Green algae	Estimated	72 hours	EC10	>100 mg/l
Poly(Dimethylsiloxane)	63148-62-9		Data not available or insufficient for classification			N/A
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	70131-67-8		Data not available or insufficient for classification			N/A
Ketoxime Silane	22984-54-9	Activated sludge	Experimental	3 hours	EC50	>1,000 mg/l
Ketoxime Silane	22984-54-9	Green algae	Experimental	72 hours	EC50	94 mg/l
Ketoxime Silane	22984-54-9	Rainbow trout	Experimental	96 hours	LC50	>120 mg/l
Ketoxime Silane	22984-54-9	Water flea	Experimental	48 hours	EC50	>120 mg/l
Ketoxime Silane	22984-54-9	Water flea	Estimated	21 days	NOEC	100 mg/l
Ketoxime Silane	22984-54-9	Green algae	Experimental	72 hours	NOEC	30 mg/l
Silane, trimethoxyoctyl-, hydrolysis products with silica	7631-86-9		Data not available or insufficient for classification			N/A
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Bacteria	Experimental	16 hours	EC50	67 mg/l
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Fathead minnow	Experimental	96 hours	LC50	168 mg/l
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Green Algae	Experimental	72 hours	EC50	8.8 mg/l
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Water flea	Experimental	48 hours	EC50	81 mg/l
N-(3-	1760-24-3	Green Algae	Experimental	72 hours	NOEC	3.1 mg/l

(trimethoxysilyl)propyl)ethylenediamine						
Octamethylcyclotetrasiloxane	556-67-2	Rainbow trout	Experimental	93 days	NOEC	0.0044 mg/l
Octamethylcyclotetrasiloxane	556-67-2	Water flea	Experimental	21 days	NOEC	0.0079 mg/l
Quartz	14808-60-7	Green Algae	Estimated	72 hours	EC50	440 mg/l
Quartz	14808-60-7	Water flea	Estimated	48 hours	EC50	7,600 mg/l
Quartz	14808-60-7	Zebra Fish	Estimated	96 hours	LC50	5,000 mg/l
Quartz	14808-60-7	Green Algae	Estimated	72 hours	NOEC	60 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Calcium Carbonate	1317-65-3	Data not available-insufficient			N/A	
Poly(Dimethylsiloxane)	63148-62-9	Data not available-insufficient			N/A	
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	70131-67-8	Data not available-insufficient			N/A	
Ketoxime Silane	22984-54-9	Estimated Hydrolysis		Hydrolytic half-life	60 seconds (t 1/2)	Non-standard method
Ketoxime Silane	22984-54-9	Estimated Biodegradation	28 days	Dissolv. Organic Carbon Deplet	0 % weight	OECD 301A - DOC Die Away Test
Silane, trimethoxyoctyl-, hydrolysis products with silica	7631-86-9	Data not available-insufficient			N/A	
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Experimental Hydrolysis		Hydrolytic half-life	1.5 minutes (t 1/2)	Non-standard method
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	39 % weight	Non-standard method
Octamethylcyclotetrasiloxane	556-67-2	Experimental Photolysis		Photolytic half-life (in air)	31 days (t 1/2)	Non-standard method
Octamethylcyclotetrasiloxane	556-67-2	Experimental Hydrolysis		Hydrolytic half-life	69.3-144 hours (t 1/2)	Non-standard method
Octamethylcyclotetrasiloxane	556-67-2	Experimental Biodegradation	28 days	CO2 evolution	3.7 % weight	OECD 310 CO2 Headspace
Quartz	14808-60-7	Data not available-insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Calcium Carbonate	1317-65-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Poly(Dimethylsiloxane)	63148-62-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Siloxanes and Silcones, Di-Me, Hydroxy-Terminated	70131-67-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Ketoxime Silane	22984-54-9	Estimated Bioconcentration		Log Kow	<0.65	Non-standard method
Silane, trimethoxyoctyl-, hydrolysis products with silica	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
N-(3-(trimethoxysilyl)propyl)ethylenediamine	1760-24-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Octamethylcyclotetrasiloxane	556-67-2	Experimental BCF - Fathead Minnow	28 days	Bioaccumulation factor	12400	Non-standard method
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

SECTION 14: Transport Information

International Regulations

UN No.: Not restricted for transport.
UN Proper shipping name: Not restricted for transport.
Transportation Class (IMO): None assigned
Transportation Class (IATA): None assigned
Other Dangerous Goods Descriptions (IMO): None assigned
Other Dangerous Goods Descriptions (IATA): None assigned
Packing Group: None assigned
Marine pollutant: None assigned

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

SECTION 16: Other information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

3M Singapore SDSs are available at www.3m.com.sg

users of these products. In addition, the recommendations for handling and use of these products should be included in worker training programs.

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Not classified.

GHS Label Elements

Symbol(s)
None required

Signal Word
None required

Hazard Statement(s)
None required

Precautionary Statement(s)
None required

Prevention
None
Wash thoroughly after handling

Response

Storage
Store locked up

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations

Other Hazards
No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Proprietary	Butyl Roll Sealant	100%

Section 4 - FIRST AID MEASURES

Description of Necessary Measures
None known.

Inhalation
Cannot be inhaled under normal circumstances.

Skin
Repeated contact with skin may result in irritation due to adhesive nature of product. Protective creams may be useful. If skin irritation occurs, get medical advice/attention.

Eyes
Cannot get into eyes under normal circumstances.

Ingestion
Cannot be ingested under normal circumstances.

Indication of any immediate medical attention and special treatment needed
Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute
None known

Delayed
None known

Note to Physicians
Nothing known to note

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
Use dry chemical, carbon dioxide, alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media
None reported.

Special Hazards Arising from the Chemical
None known

Hazardous Combustion Products
oxides of carbon, oxides of nitrogen, hydrocarbons

Advice for firefighters
Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure. Do not inhale any material or combustion by-products.

Fire Fighting Measures
Remove product from area of fire. Stay upwind and keep out of low areas.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up
Sweep up and dispose in accordance with all applicable regulations.

Environmental Precautions
None known

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
None known. Suggest wearing protective gloves. Wash thoroughly after handling. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities
Store locked up
Store in a well-ventilated place. Store above 6 C. Store below 45 C.

Incompatible Materials
None known

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits
No known exposure limits

Biological limit value
There are no biological limit values for any of this product's components.

Engineering Controls
Provide adequate ventilation. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection
No special protection needed.

Skin Protection
Wear appropriate work clothing.

Respiratory Protection
None required.

Glove Recommendations
Wear protective gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Various backings with grey or black pressure sensitive adhesive	**Physical State**	solid
Odor	None	**Color**	Various color and construction base substrates with grey or black adhesive
Odor Threshold	Not available	**pH**	Not available
Melting Point	Not available	**Boiling Point**	Not available
Freezing point	Not available	**Evaporation Rate**	Not available
Boiling Point Range	Not available	**Flammability (solid, gas)**	Not available
Autoignition	Not available	**Flash Point**	Not available
Lower Explosive Limit	Not available	**Decomposition**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	Not available
Vapor Density (air=1)	Not available	**Specific Gravity (water=1)**	Not available
Water Solubility	Not soluble	**Partition coefficient: n-octanol/water**	Not available
Viscosity	Not available	**Solubility (Other)**	Not available
Density	>1.00 (relative)	**VOC**	None

Other Information
No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity
No reactivity hazard is expected.

Chemical Stability
Stable under normal conditions of use.

Possibility of Hazardous Reactions
Hazardous polymerization will not occur.

Conditions to Avoid
None known

Incompatible Materials
None known

Hazardous decomposition products
oxides of carbon, oxides of nitrogen, hydrocarbons

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation
Unlikely under normal conditions

Skin Contact
May cause mild skin irritation with repeated contact.

Eye Contact
Unlikely under normal conditions

Ingestion
Unlikely under normal conditions.

Acute and Chronic Toxicity

No acute or chronic effects known.

Immediate Effects
No immediate effects known.

Delayed Effects
No delayed effects known.

Irritation/Corrosivity Data
My cause skin irritation with repeated contact. No other effects known.

Respiratory Sensitization
No data available.

Dermal Sensitization
No data available.

Component Carcinogenicity

No data available

Germ Cell Mutagenicity
No data available.

Reproductive Toxicity
No data available..

Specific Target Organ Toxicity - Single Exposure
No data available

Specific Target Organ Toxicity - Repeated Exposure
No data available

Aspiration hazard
No data available.

Medical Conditions Aggravated by Exposure
No data available.

Additional Data
No additional information available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Component Analysis - Aquatic Toxicity

No data available

Persistence and Degradability
No information available for the product.

Bioaccumulative Potential
No information available for the product.

Mobility
No information available for the product.

Other Toxicity
No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
UN/NA #: Not regulated

IATA Information:
UN#: Not regulated

TDG Information:
UN#: Not regulated

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan:

None

SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: No **Chronic Health:** No **Fire:** No **Pressure:** No **Reactivity:** No

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

None known

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

None known.

Canadian WHMIS Ingredient Disclosure List (IDL)
Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL:

None known

Component Analysis - Inventory
Finished product is not hazardous. Component analysis not required.

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
No	No	No	No	No	No	No	No	No	No	No	No

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 0 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 0 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes
New SDS: May 1, 2015

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute

for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:
The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name
Dyn-O-Seal II

Synonyms
Sealant

Chemical Family
Water based mastic

Product Use
Duct sealant

Restrictions on Use
For industrial use only

Manufacturer Information

Carlisle HVAC Products
900 Hensley Lane
Wylie, TX 75098
www.carlislehvac.com

Medical Emergency:
CHEMTREC (USA): (800) 424-9300

MSDS Assistance – 972-442-6545
Technical Assistance – 888-229-2199
Customer Service – 888-229-0199

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.
Reproductive Toxicity - Category 1B
Specific Target Organ Toxicity - Single Exposure - Category 1 (body, central nervous system, systemic toxicity, eyes)
Specific Target Organ Toxicity - Repeated Exposure - Category 1 (eyes,central nervous system)

GHS Label Elements

Symbol(s)

Signal Word
Danger

Hazard Statement(s)
May damage fertility or the unborn child
Causes damage to organs
Causes damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapours/spray
Wash thoroughly after handling
Do not eat, drink or smoke when using this product

Response
If exposed: Call a POISON CENTER or doctor/physician
Get medical advice/attention if you feel unwell
Specific treatment (see label)

Storage
Store locked up

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations

Statement of Unknown Toxicity
86.9402% of the mixture consists of ingredient(s) of unknown acute toxicity.

Other Hazards
No additional information available.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
Trade Secret	De-foaming agent	0.1-1
Trade Secret	Nonylphenol polyethylene glycol ether	0.1-1
Mixture	Polymer, ethyl acrylate and methacrylic acid	0.5-1.5
Mixture	Polycarboxylate salt	0.1-1
107-21-1	Ethylene glycol	0.1-1
Mixture	Fuller's earth	0.5-1.5
7664-41-7	Ammonia	0.1-1
1317-65-3	Limestone	15-40

Trade Secret	Clay compound	1-5
67-56-1	Methanol	1-5
Mixture	4,4-Dimethyloxazolidine	0.1-1
Mixture	Carbamic acid mixture	0.1-1

Section 4 - FIRST AID MEASURES

Description of Necessary Measures
If exposed: Call a POISON CENTER or doctor/physician.

Inhalation
Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Skin
Wash exposed skin with soap and water. Remove contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.

Eyes
Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Ingestion
Do NOT induce vomiting. If swallowed, get medical attention.

Indication of any immediate medical attention and special treatment needed
Treat symptomatically and supportively.

Most Important Symptoms/Effects

Acute
Causes damage to central nervous system, body, eyes, systemic toxicity.

Delayed
May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: eyes, central nervous system.

Note to Physicians
Contains: ethylene glycol, ammonia, methanol.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media
Use carbon dioxide, regular dry chemical, regular foam or water.

Unsuitable Extinguishing Media
None known.

Special Hazards Arising from the Chemical
Slight fire hazard. Sealed containers may rupture or explode if exposed to heat.

Hazardous Combustion Products
oxides of carbon, oxides of nitrogen, hydrocarbons

Advice for firefighters
Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures
Remove product from area of fire. Stay upwind and keep out of low areas.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up
Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

Environmental Precautions
Avoid release to the environment.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling
This product contains crystalline silica, which is a known carcinogen: Do not grind or sand. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. KEEP OUT OF REACH OF CHILDREN.

Conditions for Safe Storage, Including any Incompatibilities
Store locked up
Store in a well-ventilated place. Store above 0 C. Store below 45 C. When not in use, keep containers tightly closed. Do not cut, puncture, or weld on or near this container. Keep away from incompatible materials.

Incompatible Materials
Strong acids, strong oxidizing agents

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Ethylene glycol	107-21-1	
ACGIH:	100 mg/m3 Ceiling aerosol only	
Europe:	20 ppm TWA; 52 mg/m3 TWA	40 ppm STEL; 104 mg/m3 STEL
	Possibility of significant uptake through the skin	
Mexico:	100 mg/m3 Ceiling aerosol	
Ammonia	7664-41-7	
ACGIH:	25 ppm TWA	35 ppm STEL
NIOSH:	25 ppm TWA; 18 mg/m3 TWA	35 ppm STEL; 27 mg/m3 STEL
	300 ppm IDLH	
Europe:	20 ppm TWA; 14 mg/m3 TWA	50 ppm STEL; 36 mg/m3 STEL
OSHA (US):	50 ppm TWA; 35 mg/m3 TWA	
Mexico:	25 ppm TWA LMPE-PPT; 18 mg/m3 TWA LMPE-PPT	
	35 ppm STEL [LMPE-CT]; 27 mg/m3 STEL [LMPE-CT]	
Limestone	1317-65-3	
NIOSH:	10 mg/m3 TWA total dust; 5 mg/m3 TWA respirable dust	
OSHA (US):	15 mg/m3 TWA total dust; 5 mg/m3 TWA respirable fraction	
Mexico:	10 mg/m3 TWA LMPE-PPT	20 mg/m3 STEL [LMPE-CT]
Clay compound	Trade Secret	
ACGIH:	0.025 mg/m3 TWA respirable fraction	
NIOSH:	0.05 mg/m3 TWA respirable dust	50 mg/m3 IDLH respirable dust
OSHA (US):	((30)/(%SiO2 + 2) mg/m3 TWA) total dust; ((250)/(%SiO2 + 5) mppcf TWA) respirable fraction; ((10)/(%SiO2 + 2) mg/m3 TWA) respirable fraction	
Mexico:	0.1 mg/m3 TWA LMPE-PPT respirable fraction	

Methanol	67-56-1	
ACGIH:	200 ppm TWA	250 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route	
NIOSH:	200 ppm TWA; 260 mg/m3 TWA	250 ppm STEL; 325 mg/m3 STEL
	Potential for dermal absorption	
	6000 ppm IDLH	
Europe:	200 ppm TWA; 260 mg/m3 TWA	
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA; 260 mg/m3 TWA	
Mexico:	200 ppm TWA LMPE-PPT; 260 mg/m3 TWA LMPE-PPT	
	250 ppm STEL [LMPE-CT]; 310 mg/m3 STEL [LMPE-CT]	
	Skin - potential for cutaneous absorption	

Biological limit value
There are no biological limit values for any of this product's components.

Engineering Controls
Provide adequate ventilation. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection
Wear safety glasses or safety goggles, with a faceshield, as appropriate. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection
Wear appropriate work clothing.

Respiratory Protection
A NIOSH approved respirator with a dust, mist, and fume filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits or when symptoms have been observed that are indicative of overexposure.

Glove Recommendations
Wear appropriate gloves. Recommended material type: Hycron(R), neoprene, nitrile.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	gray paste	**Physical State**	solid
Odor	Slight,ammonia	**Color**	gray
Odor Threshold	Not available	**pH**	8.4 - 9.5

Melting Point	Not available	**Boiling Point**	212 °F
Freezing point	Not available	**Evaporation Rate**	28 - 32 % volatile
Boiling Point Range	Not available	**Flammability (solid, gas)**	Not available
Autoignition	Not available	**Flash Point**	Not available
Lower Explosive Limit	Not available	**Decomposition**	Not available
Upper Explosive Limit	Not available	**Vapor Pressure**	17 mmHg (@ 20 °C)
Vapor Density (air=1)	<1	**Specific Gravity (water=1)**	Not available
Water Solubility	soluble	**Partition coefficient: n-octanol/water**	Not available
Viscosity	>300 Kcps	**Solubility (Other)**	Not available
Density	1.34 - 1.41 (relative)	**VOC**	92 g/L

Other Information
No additional information available.

Section 10 - STABILITY AND REACTIVITY

Reactivity
No reactivity hazard is expected.

Chemical Stability
Stable under normal conditions of use.

Possibility of Hazardous Reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials
strong acids, strong oxidizing agents.

Hazardous decomposition products
Oxides of carbon, oxides of nitrogen, hydrocarbons

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation
May cause adverse effects on the central nervous system.

Skin Contact
May cause mild skin irritation.

Eye Contact
May cause mild eye irritation.

Ingestion
Methanol can produce blindness with onset of symptoms being delayed for 18-24 hours.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50
The components of this material have been reviewed in various sources and the following selected endpoints are published:

Ethylene-vinyl acetate copolymer (Trade Secret)
Oral LD50 Rat >2000 mg/kg

Epoxidized soybean oil (Trade Secret)
Oral LD50 Rat >5 g/kg
Dermal LD50 Rabbit >20 mL/kg

De-foaming agent (Trade Secret)
Oral LD50 >2000 mg/kg

Nonylphenol polyethylene glycol ether (Trade Secret)
Oral LD50 Rat 2780 mg/kg

Chlorinated paraffins (Trade Secret)
Oral LD50 Rat >4 g/kg

Polymer, ethyl acrylate and methacrylic acid (Mixture)
Oral LD50 Rat >5000 mg/kg
Dermal LD50 Rabbit >5000 mg/kg

Polycarboxylate salt (Mixture)
Oral LD50 Rat >5000 mg/kg
Dermal LD50 Rabbit >2000 mg/kg

Ethylene glycol (107-21-1)
Oral LD50 Rat 4700 mg/kg
Dermal LD50 Rat 10600 mg/kg
Inhalation LC50 Rat >200 mg/m3 vapor 4 hr

Ammonia (7664-41-7)
Oral LD50 Rat 350 mg/kg
Inhalation LC50 Rat 2000 ppm 4 h

Limestone (1317-65-3)
Oral LD50 Rat 6450 mg/kg

Clay compound (Trade Secret)
Oral LD50 Rat 500 mg/kg

Methanol (67-56-1)
Oral LD50 Rat 6200 mg/kg
Inhalation LC50 Rat 22500 ppm 8 h

4,4-Dimethyloxazolidine (Mixture)
Oral LD50 Rat 1037 mg/kg
Dermal LD50 Rat >2000 mg/kg
Inhalation LC50 Rat 1.1 mg/L 4 hr

Carbamic acid mixture (Mixture)
Oral LD50 Rat >2000 mg/kg
Dermal LD50 Rabbit >2000 mg/kg
Inhalation LC50 Rat >2.04 mg/L 4 hr

Immediate Effects
Causes damage to central nervous system, body, eyes, systemic toxicity.

Delayed Effects
May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: eyes, central nervous system.

Irritation/Corrosivity Data
May cause mild skin irritation. May cause mild eye irritation.

Respiratory Sensitization
No data available.

Dermal Sensitization
No data available.

Component Carcinogenicity

Chlorinated paraffins	Trade Secret
IARC:	Monograph 48 [1990] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 3B (could be carcinogenic for man)
OSHA:	Present
Ethylene glycol	107-21-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen

Clay compound	Trade Secret
ACGIH:	A2 - Suspected Human Carcinogen
IARC:	Monograph 100C [2012]; Monograph 68 [1997] (Group 1 (carcinogenic to humans))
NTP:	Known Human Carcinogen (respirable size)
DFG:	Category 1 (causes cancer in man, alveola fraction)
OSHA:	Present (respirable size)

Germ Cell Mutagenicity
No data available.

Reproductive Toxicity
May damage fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure
Central nervous system, body, systemic toxicity, eyes

Specific Target Organ Toxicity - Repeated Exposure
Central nervous system, eyes

Aspiration hazard
No data available.

Medical Conditions Aggravated by Exposure
No data available.

Additional Data
This product contains crystalline silica, which is a known carcinogen. However, this component is bound by the polymer portion of the sealant. The only way this component would be released is through incineration. Therefore, this product is not considered a carcinogen.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity
Avoid release to the environment.

Component Analysis - Aquatic Toxicity

Ethylene-vinyl acetate copolymer	Trade Secret
Fish:	LC50 96 hr Cyprinus carpio >1000 mg/L
Epoxidized soybean oil	Trade Secret
Fish:	LC50 48 hr Fish 900 mg/L

Algae:	EC50 72 h Desmodesmus subspicatus 8 mg/L IUCLID
Invertebrate:	Ec50 24 hr Daphnia >100 mg/L
Chlorinated paraffins	Trade Secret
Fish:	LC50 96 h Lepomis macrochirus >300 mg/L [static]; LC50 96 h Oncorhynchus mykiss >0.0109 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 94.5 - 271 mg/L [static]; LC50 96 h Lepomis macrochirus >0.1 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]
Invertebrate:	EC50 48 hr Daphnia magna 0.0059 mg/L
Polymer, ethyl acrylate and methacrylic acid	Mixture
Fish:	LC50 96 hr Pimephales promelas >1000 mg/L
Invertebrate:	EC50 48 hr Daphnia magna >1000 mg/L
Ethylene glycol	107-21-1
Fish:	LC50 96 h Oncorhynchus mykiss 41000 mg/L; LC50 96 h Oncorhynchus mykiss 14 - 18 mL/L [static]; LC50 96 h Lepomis macrochirus 27540 mg/L [static]; LC50 96 h Oncorhynchus mykiss 40761 mg/L [static]; LC50 96 h Pimephales promelas 40000 - 60000 mg/L [static]; LC50 96 h Poecilia reticulata 16000 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata 6500 - 13000 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 46300 mg/L IUCLID
Ammonia	7664-41-7
Fish:	LC50 96 h Cyprinus carpio 0.44 mg/L; LC50 96 h Lepomis macrochirus 0.26 - 4.6 mg/L; LC50 96 h Lepomis macrochirus 1.17 mg/L [flow-through]; LC50 96 h Pimephales promelas 0.73 - 2.35 mg/L; LC50 96 h Pimephales promelas 5.9 mg/L [static]; LC50 96 h Poecilia reticulata >1.5 mg/L; LC50 96 h Poecilia reticulata 1.19 mg/L [static]
Invertebrate:	LC50 48 h Daphnia magna 25.4 mg/L IUCLID

Methanol	67-56-1
Fish:	LC50 96 h Pimephales promelas 28200 mg/L [flow-through]; LC50 96 h Pimephales promelas >100 mg/L [static]; LC50 96 h Oncorhynchus mykiss 19500 - 20700 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 18 - 20 mL/L [static]; LC50 96 h Lepomis macrochirus 13500 - 17600 mg/L [flow-through]
4,4-Dimethyloxazolidine	Mixture
Fish:	LC50 96 hr Rainbow trout 95 mg/L [flow-through]

Persistence and Degradability
No information available for the product.

Bioaccumulative Potential
No information available for the product.

Mobility
No information available for the product.

Other Toxicity
No additional information available.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
UN/NA #: Not regulated

IATA Information:
UN#: Not regulated

IMDG Information:
UN#: Not regulated

TDG Information:
UN#: Not regulated

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations
This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ethylene glycol	107-21-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Ammonia	7664-41-7
SARA 302:	500 lb TPQ
SARA 313:	1 % de minimis concentration (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)
CERCLA:	100 lb final RQ; 45.4 kg final RQ
OSHA (safety):	10000 lb TQ anhydrous); 15000 lb TQ solution, >44% Ammonia by weight)
SARA 304:	100 lb EPCRA RQ
Methanol	67-56-1
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lb final RQ; 2270 kg final RQ
Carbamic acid mixture	Mixture
CERCLA:	10 lb final RQ; 4.54 kg final RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)
Acute Health: Yes **Chronic Health:** Yes **Fire:** No **Pressure:** No **Reactivity:** No

U.S. State Regulations
The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Chlorinated paraffins	Trade Secret	No	Yes	No	No	No
Ethylene glycol	107-21-1	Yes	Yes	Yes	Yes	Yes
Ammonia	7664-41-7	Yes	Yes	Yes	Yes	Yes

Limestone	1317-65-3	No	Yes	Yes	Yes	Yes
Clay compound	Trade Secret	No	Yes	Yes	Yes	Yes
Methanol	67-56-1	Yes	Yes	Yes	Yes	Yes
Carbamic acid mixture	Mixture	No	No	No	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the state of California to cause cancer
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Clay compound	Trade Secret
Carc:	carcinogen , initial date 10/1/88 (airborne particles of respirable size)
Methanol	67-56-1
Repro/Dev. Tox	Developmental toxicity , initial date 3/16/12

Canadian WHMIS Ingredient Disclosure List (IDL)
Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

Ethylene glycol	107-21-1
	1 %
Ammonia	7664-41-7
	1 %
Clay compound	Trade Secret
	1 %
Methanol	67-56-1
	1 %

Component Analysis - Inventory
Ethylene-vinyl acetate copolymer (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	ELN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Epoxidized soybean oil (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Nonylphenol polyethylene glycol ether (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

Chlorinated paraffins (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Polymer, ethyl acrylate and methacrylic acid (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Ethylene glycol (107-21-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Fuller's earth (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

Ammonia (7664-41-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Limestone (1317-65-3)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Clay compound (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Kaolin, calcined (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Methanol (67-56-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

4,4-Dimethyloxazolidine (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Carbamic acid mixture (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 1* Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

NFPA Ratings

Health: 1 Fire: 0 Reactivity: 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Summary of Changes
New SDS: April 1, 2015

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Disclaimer:
The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, CCWI Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent, since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

S A F E T Y D A T A S H E E T

DP 1010 **GRAY, SMOOTH WATER BASED DUCT SEALANT**

========== SECTION I – PRODUCT AND COMPANY IDENTIFICATION ==========

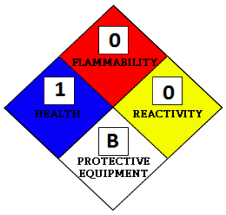
PRODUCT NAME: GRAY, SMOOTH WATER BASED DUCT SEALANT
PRODUCT CODE: DP 1010

MANUFACTURERS' NAME: DESIGN POLYMERICS

ADDRESS: 3301 W. Segerstrom Ave.
Santa Ana, CA 92704

HMIS	
Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	B

EMERGENCY PHONE: Chem-Tel: (800) 255-3924 (24 Hrs)
BUSINESS HOURS: 7:30am – 4:30pm PT
CONTRACT NUMBER: MIS0005056
REVISION DATE: September 9, 2020
INFORMATION PHONE: (714) 432-0600
REVISION #: 14.3
PREPARED BY: Technical Dept. Supersedes all previous
DOT HAZARD CLASS: Not Hazardous UN Number N/A
SHIPPING NAME: N/A Packing Group N/A



========== SECTION II - HAZARDOUS INGREDIENTS / SARA III INFORMATION ==========

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
None			

========== SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS ==========

CAS #	Trade secret Y/N	Chemical Name	Comment
Proprietary Blend	YES		

========== SECTION IV – FIRST AID MEASURES ==========

INHALATION: Remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, administer artificial respiration. Contact physician or emergency medical facility immediately.

SKIN: Remove contaminated clothing and shoes. Wash exposed area thoroughly with soap and water for at least 15 minutes. Do not rub affected area. If irritation persists, get medical attention. Skin reaction may take 24 to 48 hours to develop. Wash contaminated clothing before reuse.
EYES: Immediately flush eyes with large amounts of water for at least 15 minutes while frequently lifting the upper and lower eyelids. If irritation persists, call a physician.

INGESTION: Do not induce vomiting. Contact physician or emergency medical facility immediately. Never give anything by mouth to an unconscious person.

========== SECTION V - FIRE-FIGHTING MEASURES ==========

FLASH POINT: Not Applicable METHOD USED: Not Applicable
FLAMMABLE LIMITS IN AIR BY VOLUME – LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA: The product will only burn after the water it contains is driven off. For dried film use water, foam, carbon dioxide or dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: When dried film burns, carbon dioxide (CO_2), carbon monoxide (CO), hydrogen chloride gas (HCl), and smoke are produced. Firefighters should wear self-contained breathing apparatus, especially in enclosed areas. Cool containers and minimize vapors with water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers exposed to high temperatures may explode or burst due to build-up of steam pressure.

========== SECTION VI – ACCIDENTAL RELEASE MEASURES ==========

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Dike, contain, or absorb with inert absorbent material. Collect spilled material in a salvage container. Prevent spill from entering sewers, drains, streams, waterways, or other bodies of water.

WASTE DISPOSAL METHOD: Dispose of in accordance with all local, state and federal regulations.

========== SECTION VII – HANDLING AND STORAGE ==========

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: **DO NOT ALLOW TO FREEZE.** Store in a cool dry location away from heat. Keep containers tightly closed and store with adequate ventilation.

OTHER PRECAUTIONS: DO NOT TAKE INTERNALLY. Avoid inhalation of excess vapors, ingestion, and unnecessary, prolonged, or repeated contact with this and any other chemical. Change soiled work clothes frequently. Clean hands after handling. KEEP OUT OF REACH OF CHILDREN.

========== SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION ==========

RESPIRATORY PROTECTION: Not required under normal conditions. Provide sufficient ventilation to maintain constant fresh air in workspace. If TLV is exceeded, use NIOSH/MSHA approved organic vapor and mist, supplied air, or self-contained breathing apparatus. Avoid breathing sanding dust.

VENTILATION: Use adequate mechanical (general and/or local) ventilation to maintain exposure below TLV.

SKIN PROTECTION (PROTECTIVE GLOVES): Wear resistant gloves such as polyethylene.

EYE PROTECTION: Use chemical splash goggles or OSHA permitted safety glasses.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Wear impervious clothing. Eye wash station.

WORK / HYGENIC PRACTICES: Source of clean water should be available for flushing eyes and washing skin. Wash thoroughly after handling any chemicals, especially before eating, drinking, or smoking. Remove and launder contaminated clothing before reuse.

========== SECTION IX - PHYSICAL / CHEMICAL PROPERTIES ==========

PHYSICAL FORM: Viscous liquid
ODOR: Mild, sweet
SOLUBILITY IN WATER: Miscible
BOILING POINT: 212ºF
FREEZING POINT: 32º F (0º C)
COATING V.O.C.: 0 g/l

COLOR: Gray
pH: 7.5-9.0
SPECIFIC GRAVITY (H_2O=1): 1.3-1.5
% VOLATILES BY WEIGHT: 25-35
VISCOSITY (cps): approx. 300,000-400,000

========== SECTION X – STABILITY AND REACTIVITY DATA ==========

STABILITY: Stable at ambient temperatures.

CONDITIONS TO AVOID: Coagulation may occur after freezing, thawing, or boiling.

INCOMPATIBILITY (MATERIALS TO AVOID): Metal salts, mineral acids (i.e. sulfuric, phosphoric, etc.) Strong oxidizing agents. Strong reducing agents.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: May form toxic materials on thermal decomposition including Carbon monoxide (CO), Carbon dioxide (CO_2), and various hydrocarbons. Under fire conditions, this product will release hydrogen chloride gas.

========== SECTION XI – TOXICOLOGICAL INFORMATION ==========

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Adverse health effects from vapors or spray mists in poorly ventilated areas may include irritation of the mucous membranes of the nose, throat, and respiratory tract and symptoms of headache and nausea.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: EYES: In direct contact, may cause irritation. SKIN: Prolonged and repeated contact with product may cause skin irritation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Redness, drying of the skin, or other signs of irritation or contact dermatitis.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

HEALTH HAZARDS (ACUTE AND CHRONIC): ACUTE: May cause irritation to skin and eyes, gastrointestinal irritation, nausea, and vomiting. CHRONIC: Prolonged or repeated exposure above TLV may result in permanent brain and nervous system damage.

CARCINOGENICITY: NTP CARCINOGEN: No IARC MONOGRAPHS: No OSHA REGULATED: No

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: May be aggravating to some skin and respiratory conditions, and to pre-existing liver and/or kidney disorders.

========== SECTION XII – ECOLOGICAL INFORMATION ==========

Ecotoxicity: No ecotoxicity date was found for the product
Environmental Fate: No environmental information found for this product

========== SECTION XIII – DISPOSAL CONSIDERATIONS ==========

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines

========== SECTION XIV – TRANSPORT INFORMATION ==========

DOT Hazard Class	Not Hazardous	UN Number	N/A
Shipping Name	N/A	Packing Group	N/A

========== SECTION XV –REGULATORY INFORMATION ==========

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW (SARA TITLE III):

Not listed as a hazardous substance

Section 313 Information (40 CFR 372) – Toxic Chemicals List: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:

Component	CAS#	% by Weight
None Listed		

Toxic Substances Control Act (TSCA): All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): None listed.

========== SECTION XVI –OTHER INFORMATION ==========

SDS Creation Date:	January 24, 2017
SDS Revision Date:	September 9, 2020
SDS Revision Notes:	Section 16 Correction
SDS Author:	Technical Department

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: August 11, 2020

1 Identification

· **Product identifier**

· **Trade name:** **Proseal**
Fiberseal

· **Other means of identification:** No other identifiers

· **Recommended use and restriction on use**
· **Recommended use:** Water based sealant
· **Restrictions on use:** No relevant information available.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Ductmate Industries, Inc.
210 5th St.
Charleroi, PA 15022
Phone: 800-990-8459

· **Emergency telephone number:**
ChemTel
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

· **Classification of the substance or mixture**
The product is not classified as hazardous according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Not regulated.
· **Hazard pictograms:** Not regulated.
· **Signal word:** Not regulated.
· **Hazard statements:** Not regulated.
· **Precautionary statements:** Not regulated.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**		
1317-65-3	Limestone	10-40%
14807-96-6	Talc	10-40%
57-55-6	Propylene glycol	<5%

· **Additional information:** For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:**
Respiration of particulates is unlikely during normal usage.

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Supply fresh air and to be sure to call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation or rash occurs: Get medical advice/attention.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
· **Most important symptoms and effects, both acute and delayed:**
Nausea in case of ingestion.
May cause gastro-intestinal irritation if ingested.
· **Indication of any immediate medical attention and special treatment needed:** Treat symptomatically.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
The product is not flammable.
Use fire fighting measures that suit the environment.
· **For safety reasons unsuitable extinguishing agents:** None.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Use personal protective equipment as required.
· **Environmental precautions** Avoid release to the environment.
· **Methods and material for containment and cleaning up**
Towel or mop up material and collect in a suitable container.
For larger spills, add sawdust, chalk or other inert binding material, then sweep up and discard.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

(Cont'd. on page 3)

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· **Handling**
· **Precautions for safe handling:**
Use only in well ventilated areas.
Avoid contact with the eyes and skin.

· **Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:**
Store in cool, dry conditions in well sealed receptacles.
· **Information about storage in one common storage facility:**
Store away from oxidizing agents.
Store away from foodstuffs.
· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
1317-65-3 Limestone	
PEL (USA)	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV (USA)	TLV withdrawn
14807-96-6 Talc	
PEL (USA)	Long-term value: 20 mppcf ppm (containing <1% Quartz)
REL (USA)	Long-term value: 2* mg/m³ *respirable dust; and <1% Quartz
TLV (USA)	Long-term value: 2* mg/m³ *as respirable fraction; E
EL (Canada)	Long-term value: 2 *0.1 f/cc mg/m³ resp. *if contains asbestos : ACGIH A1, IARC 1
EV (Canada)	Long-term value: 2* mg/m³, 2 f/cc ppm *respirable
LMPE (Mexico)	Long-term value: 2* mg/m³ A4, *fracción respirable
57-55-6 Propylene glycol	
WEEL (USA)	Long-term value: 10 mg/m³
EV (Canada)	Long-term value: 155* 10** mg/m³, 50* ppm *vapour and aerosol;**aerosol only

· **Exposure controls**
· **General protective and hygienic measures:**
Avoid contact with the eyes and skin.
Keep away from foodstuffs, beverages and feed.

(Cont'd. on page 4)

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Do not breathe dust/fume/gas/mist/vapors/spray.
Wash hands before breaks and at the end of work.
· **Engineering controls:** No relevant information available.
· **Breathing equipment:**
Not required under normal conditions of use.
A NIOSH approved dust respirator should be used for operations generating dust.
· **Protection of hands:**
Gloves are advised for repeated or prolonged contact.
Wear protective gloves to handle contents of damaged or leaking units.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Eye protection:** Follow relevant national guidelines concerning the use of protective eyewear.
· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment**
Avoid release to the environment.
· **Risk management measures** No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **Appearance:**	
Form:	Liquid
Color:	Gray
· **Odor:**	Mild
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Melting point/Melting range:**	Not determined.
· **Boiling point/Boiling range:**	Not determined.
· **Flash point:**	Not applicable. The product is not flammable.
· **Flammability (solid, gaseous):**	Not determined.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits**	
Lower:	Not determined.
Upper:	Not determined.
· **Oxidizing properties:**	Non-oxidizing.
· **Vapor pressure:**	Not determined.
· **Density:**	
Relative density:	1.35±0.04
Vapor density:	Not determined.
Evaporation rate:	Not determined.

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Fiberseal

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· **Solubility in / Miscibility with Water:**	Soluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Other information**	No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions** Reacts with strong oxidizing agents.
· **Conditions to avoid** Excessive heat.
· **Incompatible materials** Oxidizers
· **Hazardous decomposition products**
Under fire conditions only:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.
· **LD/LC50 values that are relevant for classification:** None.
· **Primary irritant effect:**
· **On the skin:** Based on available data, the classification criteria are not met.
· **On the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Ingestion.
Eye contact.
Skin contact.
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

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· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** No relevant information available.
· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number** · **DOT, ADR/RID/ADN, IMDG, IATA**	Not regulated.
· **UN proper shipping name** · **DOT, ADR/RID/ADN, IMDG, IATA**	Not regulated.
· **Transport hazard class(es)** · **DOT, ADR/RID/ADN, IMDG, IATA** · **Class**	Not regulated.
· **Packing group** · **DOT, ADR/RID/ADN, IMDG, IATA**	Not regulated.
· **Environmental hazards** · **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.

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· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 302 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act)**
All ingredients are listed or exempt.

· **Proposition 65 (California)**
· **Chemicals known to cause cancer:**
Reference to talc not applicable to product, as product contains no asbestiform fibers.

14807-96-6	Talc

· **Chemicals known to cause developmental toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**
None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL):**
All ingredients are listed or exempt.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association

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CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
OSHA: Occupational Safety & Health Administration

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

SDS Prepared by:
ChemTel
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtel.com

IPEX

GHS SAFETY DATA SHEET

Date Revised: **JAN 2017**

IPEX SYS 15/XFR GRY One Step MED Low VOC Cement for PVC Plastic Pipe Supersedes: **NOV 2014**

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **IPEX SYS 15/XFR GRY One Step MED Low VOC Cement for PVC Plastic Pipe**

PRODUCT USE: Low VOC Solvent Cement for PVC Plastic Pipe

SUPPLIER: IPEX Inc.
807 Pharmacy Avenue
Scarborough, Ontario M1L 3K2, CAN

MANUFACTURER: IPS Corporation
17109 South Main Street, Gardena, CA 90248-3127
P.O. Box 379, Gardena, CA 90247-0379
Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) **Medical:** CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health		Environmental		Physical	
Acute Toxicity:	Category 4	Acute Toxicity:	None Known	Flammable Liquid	Category 2
Skin Irritation:	Category 3	Chronic Toxicity:	None Known		
Skin Sensitization:	NO				
Eye:	Category 2				

GHS LABEL: 

Signal Word:
Danger

WHMIS CLASSIFICATION: CLASS B, DIVISION 2
CLASS D, DIVISION 2B

Hazard Statements	Precautionary Statements
H225: Highly flammable liquid and vapor	P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
H319: Causes serious eye irritation	P261: Avoid breathing dust/fume/gas/mist/vapors/spray
H335: May cause respiratory irritation	P280: Wear protective gloves/protective clothing/eye protection/face protection
H336: May cause drowsiness or dizziness	P337+P313: Get medical advice/attention
H351: Suspected of causing cancer	P403+P233: Store in a well ventilated place. Keep container tightly closed
EUH019: May form explosive peroxides	P501: Dispose of contents/container in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	40 - 55
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	5 - 15
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	3 - 15
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	10 - 20

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).
# indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:
Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects: Category 2 Carcinogen

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.
Unsuitable Extinguishing Media: Water spray or stream.
Exposure Hazards: Inhalation and dermal contact
Combustion Products: Oxides of carbon, hydrogen chloride and smoke

	HMIS	NFPA	
Health	2	2	0-Minimal
Flammability	3	3	1-Slight
Reactivity	0	0	2-Moderate
PPE	B		3-Serious
			4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.
Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
Do not eat, drink or smoke while handling.
Storage: Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight.
Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
Acetone	500 ppm	750 ppm	1000 ppm	N/E	N/E	500 ppm	3000 ppm	750 ppm
Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.
With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Gray, medium syrupy liquid		
Odor:	Ketone	**Odor Threshold:**	0.88 ppm (Cyclohexanone)
pH:	Not Applicable		
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	**Boiling Range:**	56°C (133°F) to 156°C (313°F)
Boiling Point:	56°C (133°F) Based on first boiling component: Acetone	**Evaporation Rate:**	> 1.0 (BUAC = 1)
Flash Point:	-20°C (-4°F) TCC based on Acetone	**Flammability:**	Category 2
Specific Gravity:	0.955 @23°C (73°F)	**Flammability Limits:**	**LEL:** 1.1% based on Cyclohexanone
Solubility:	Solvent portion soluble in water. Resin portion separates out.		**UEL:** 12.8% based on Acetone
Partition Coefficient n-octanol/water:	Not Available	**Vapor Pressure:**	190 mm Hg @ 20°C (68°F) Acetone
Auto-ignition Temperature:	321°C (610°F) based on THF	**Vapor Density:**	>2.0 (Air = 1)
Decomposition Temperature:	Not Applicable	**Other Data: Viscosity:**	Medium bodied

VOC Content: When applied as directed, per SCAQMD Rule 1168, Test Method 316A,VOC content is: ≤ 510 g/l.

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable

Hazardous decomposition products: None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.

Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources.

Incompatible Materials: Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity:	LD_{50}	LC_{50}	**Target Organs**
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m^3 (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m^3 (rat)	STOT SE3
Acetone	Oral: 5800 mg/kg (rat)	Inhalation 50,100 mg/m^3 (rat)	STOT SE3
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)	

Reproductive Effects	**Teratogenicity**	**Mutagenicity**	**Embryotoxicity**	**Sensitization to Product**	**Synergistic Products**
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: None Known

Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 510 g/l.

Degradability: Not readily biodegradable

Bioaccumulation: Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Adhesives
Hazard Class: 3
Secondary Risk: None
Identification Number: UN 1133
Packing Group: PG II
Label Required: Class 3 Flammable Liquid
Marine Pollutant: NO

EXCEPTION for Ground Shipping
DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" .

TDG INFORMATION	
TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information: Highly Flammable, Irritant, Carc. Cat. 2
Symbols: F, Xi
Risk Phrases: R11: Highly flammable. R36/37: Irritating to eyes and respiratory system. R66: Repeated exposure may cause skin dryness or cracking R67: Vapors may cause drowsiness and dizziness
Safety Phrases: S2: Keep out of the reach of children S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S25: Avoid contact with eyes. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33: Take precautionary measures against static discharges.

Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)

SECTION 16 - OTHER INFORMATION

Specification Information: All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).
Department issuing data sheet: Safety Health & Environmental Affairs
Training necessary: Yes, training in practices and procedures contained in product literature.
Reissue date / reason for reissue: 1/19/2017 / Updated GHS Standard Format
Intended Use of Product: Solvent Cement for PVC Plastic Pipe

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

IPEX

GHS SAFETY DATA SHEET

Date Revised: **JAN 2017**

IPEX SYS 636 GRY Low VOC Cement for PVC Plastic Pipe

Supersedes: **NOV 2014**

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **IPEX SYS 636 GRY Low VOC Cement for PVC Plastic Pipe**

PRODUCT USE: Low VOC Solvent Cement for PVC Plastic Pipe

SUPPLIER: IPEX Inc.
807 Pharmacy Avenue
Scarborough, Ontario M1L 3K2, CAN

MANUFACTURER: IPS Corporation
17109 South Main Street, Gardena, CA 90248-3127
P.O. Box 379, Gardena, CA 90247-0379
Tel. 1-310-898-3300

EMERGENCY: Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International) **Medical:** CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Health		Environmental		Physical	
Acute Toxicity:	Category 4	Acute Toxicity:	None Known	Flammable Liquid	Category 2
Skin Irritation:	Category 3	Chronic Toxicity:	None Known		
Skin Sensitization:	NO				
Eye:	Category 2				

GHS LABEL:

Signal Word:
Danger

WHMIS CLASSIFICATION: CLASS B, DIVISION 2
CLASS D, DIVISION 2B

Hazard Statements	Precautionary Statements
H225: Highly flammable liquid and vapor	P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
H319: Causes serious eye irritation	P261: Avoid breathing dust/fume/gas/mist/vapors/spray
H332: Harmful if inhaled	P280: Wear protective gloves/protective clothing/eye protection/face protection
H335: May cause respiratory irritation	P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
H336: May cause drowsiness or dizziness	P403+P233: Store in a well ventilated place. Keep container tightly closed
H351: Suspected of causing cancer	P501: Dispose of contents/container in accordance with local regulation
EUH019: May form explosive peroxides	

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	25 - 50
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	5 - 36
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	15 - 30

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.
* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).
# indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

SECTION 4 - FIRST AID MEASURES

Contact with eyes: Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
Inhalation: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
Ingestion: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

Acute symptoms and effects:

Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.

Chronic (long-term) effects: Category 2 Carcinogen

SECTION 5 - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.
Unsuitable Extinguishing Media: Water spray or stream.
Exposure Hazards: Inhalation and dermal contact
Combustion Products: Oxides of carbon, hydrogen chloride and smoke

	HMIS	NFPA	
Health	2	2	0-Minimal
Flammability	3	3	1-Slight
Reactivity	0	0	2-Moderate
PPE	B		3-Serious
			4-Severe

Protection for Firefighters: Self-contained breathing apparatus or full-face positive pressure airline masks.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from heat, sparks and open flame.
Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.
Prevent contact with skin or eyes (see section 8).
Environmental Precautions: Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
Methods for Cleaning up: Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
Materials not to be used for clean up: Aluminum or plastic containers

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.
Do not eat, drink or smoke while handling.
Storage: Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight.
Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
Follow all precautionary information on container label, product bulletins and solvent cementing literature.

SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
Cyclohexanone	20 ppm	50 ppm	50 ppm	N/E	N/E	25 ppm	N/E	N/E

Engineering Controls: Use local exhaust as needed.
Monitoring: Maintain breathing zone airborne concentrations below exposure limits.
Personal Protective Equipment (PPE):
Eye Protection: Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.
Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.
Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.
Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.
With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Gray, medium syrupy liquid		
Odor:	Ketone	**Odor Threshold:**	0.88 ppm (Cyclohexanone)
pH:	Not Applicable		
Melting/Freezing Point:	-108.5°C (-163.3°F) Based on first melting component: THF	**Boiling Range:**	66°C (151°F) to 156°C (313°F)
Boiling Point:	66°C (151°F) Based on first boiling component: THF	**Evaporation Rate:**	> 1.0 (BUAC = 1)
Flash Point:	-20°C (-4°F) TCC based on THF	**Flammability:**	Category 2
Specific Gravity:	0.9611 @23°C (73°F)	**Flammability Limits:**	**LEL:** 1.1% based on Cyclohexanone
Solubility:	Solvent portion soluble in water. Resin portion separates out.		**UEL:** 11.8% based on THF
Partition Coefficient n-octanol/water:	Not Available	**Vapor Pressure:**	129 mm Hg @ 20°C (68°F)based on THF
Auto-ignition Temperature:	321°C (610°F) based on THF	**Vapor Density:**	>2 (Air = 1)
Decomposition Temperature:	Not Applicable	**Other Data: Viscosity:**	Medium bodied

VOC Content: When applied as directed, per SCAQMD Rule 1168, Test Method 316A,VOC content is: ≤ 510 g/l.

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable

Hazardous decomposition products: None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.

Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources.

Incompatible Materials: Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity:	LD_{50}	LC_{50}	**Target Organs**
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m^3 (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m^3 (rat)	STOT SE3
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)	

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: None Known

Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 510 g/l.

Degradability: Not readily biodegradable

Bioaccumulation: Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Adhesives

Hazard Class: 3

Secondary Risk: None

Identification Number: UN 1133

Packing Group: PG II

Label Required: Class 3 Flammable Liquid

Marine Pollutant: NO

EXCEPTION for Ground Shipping
DOT Limited Quantity: Up to 5L per inner packaging, 30 kg gross weight per package.
Consumer Commodity: Depending on packaging, these quantities may qualify under DOT as "ORM-D" .

TDG INFORMATION	
TDG CLASS:	FLAMMABLE LIQUID 3
SHIPPING NAME:	ADHESIVES
UN NUMBER/PACKING GROUP:	UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information: Highly Flammable, Irritant, Carc. Cat. 2

Symbols: F, Xi

Ingredient Listings: USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)

Risk Phrases:

R11: Highly flammable.
R20: Harmful by inhalation.
R36/37: Irritating to eyes and respiratory system.
R66: Repeated exposure may cause skin dryness or cracking
R67: Vapors may cause drowsiness and dizziness

Safety Phrases:

S9: Keep container in a well-ventilated place.
S16: Keep away from sources of ignition - No smoking.
S25: Avoid contact with eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33: Take precautionary measures against static discharges.
S46: If swallowed, seek medical advise immediately and show this container or label.

SECTION 16 - OTHER INFORMATION

Specification Information: All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).

Department issuing data sheet: Safety Health & Environmental Affairs

Training necessary: Yes, training in practices and procedures contained in product literature.

Reissue date / reason for reissue: 1/19/2017 / Updated GHS Standard Format

Intended Use of Product: Solvent Cement for PVC Plastic Pipe

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

SAFETY DATA SHEET

Glass Mineral Wool Insulation (Brown)

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name Glass Mineral Wool Insulation (Brown)

Product number MA_DP_101

Synonyms; trade names Akousti-Liner™, Akousti-Liner R™, Alley Wrap B™, Akousti-Shield™, Akousti-Board Black™, AK Board™, High Temperature Board, High Temperature Blanket, High Temperature Panel, High Temperature Batt, High Temperature HD Blanket, Alley K™ Pipe Insulation (*See section 2, 8, 10)

Revision date: 05/30/2018

Recommended use of the chemical and restrictions on use

Application Thermal and/or acoustic insulation for use in technical applications, industrial applications and in building construction.

Uses advised against None known.

Details of the supplier of the safety data sheet

Supplier Manson Insulation Products Ltd
One Knauf Drive
IN 46176-1 Shelbyville
800 825 4434
sds@knaufinsulation.com
www.imanson.com

Region: United States, Central & South America

Emergency telephone number

Emergency telephone 24hrs: Chemtrec Tel: 800 424 9300

Glass Mineral Wool Insulation (Brown)

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status This product is regulated as a nuisance dust under OSHA criteria.

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Label elements

Hazard statements NC Not Classified

Contains None.

Hazard pictogram None.

Signal word None.

Precautionary statements None.

Supplemental label information None.

The following sentences and pictograms are printed on packaging:

The mechanical effect of fibers in contact with skin may cause temporary itching.

http://www.knaufinsulation.com/comfort-and-handling

Other hazards

Physical Hazards None.

Health Hazards Mechanical irritation of the skin, eyes and upper respiratory system.

Environmental Hazards None.

Main symptoms Contact with skin, eyes and upper respiratory system may cause mechanical irritation. Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

***Heat-Up Precautions** When heated to temperatures above 400°F for the first time, release of binder components and binder decomposition products can occur which, in high concentrations, may irritate eyes and the respiratory system. See section 8 & 10

Glass Mineral Wool Insulation (Brown)

3. Composition/information on ingredients

Mixtures

Biosoluble glass mineral wool	**87 - 100%**
CAS number: —	
Ingredient notes:(1)(2)	
Classification	
Not Classified	
Thermo set, inert polymer bonding agent derived from plant starches	**0 - 13%**
CAS number: —	
Classification	
Not Classified	

The full text for all hazard statements is displayed in Section 16.

Ingredient notes

(1) Man made vitreous (silicate) fibers with random orientation with alkaline oxide and alkali earth oxide ($Na_2O+K_2O+CaO+MgO+BaO$) content greater than 18% by weight meeting the requirements of Note Q of regulation n° 1272/2008 and therefore not classified carcinogenicity.
(2) All Knauf Insulation products covered by this SDS are independently certified by EUCEB to be manufactured using biosoluble glass formulations and thus exempt from labeling under NTP or California Prop 65 requirements.

Specific chemical identity and/or exact percent concentration is withheld as trade secret.

Glass Mineral Wool Insulation (Brown)

4. First-aid measures

Description of first aid measures

General information Show this Safety Data Sheet to the medical professional in attendance. If symptoms occur, follow first aid measures as appropriate.

Notes to Physician: No specific recommendations.

Inhalation Remove from exposure. Rinse the throat and clear dust from airways.

Ingestion Drink plenty of water if accidentally ingested.

Skin Contact If mechanical irritation occurs, remove contaminated clothing and wash skin gently with cold water and soap.

Eye contact Rinse abundantly with water for at least 15 minutes.

Most important symptoms and effects, both acute and delayed

General information Contact with skin, eyes and upper respiratory system may cause mechanical irritation. Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

Indication of immediate medical attention and special treatment needed

General information If any adverse reaction or discomfort continues from any of the above exposures, seek professional medical advice.

Specific treatments No specific recommendations.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Water, foam, carbon dioxide (CO2), and dry powder.

Special hazards arising from the substance or mixture

General information Products do not pose a fire hazard in use; however, some packaging materials or facings may be combustible. Products of combustion from product and packaging - carbon dioxide, carbon monoxide and some trace gases such as ammonia, nitrogen oxides and volatile organic substances.

Advice for firefighters

General information In large fires in poorly ventilated areas involving packaging materials respiratory protection / breathing apparatus may be required.

Glass Mineral Wool Insulation (Brown)

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Minimize direct contact with skin in order to prevent mechanical itching. In dusty environments, use suitable respiratory protection such as 3M 8210, N95 or equivalent. Use glasses or goggles when working with mineral wool insulation above shoulder height or in dusty environments. Where possible, use natural ventilation during installation in order to minimize dust levels.

After contact with the product, rinse skin in cold water to reduce potential effects of mechanical itching. Dispose of surplus product in accordance with local regulations.

Use personal protection recommended in Section 8 of the SDS.

Environmental precautions

Environmental precautions Not relevant.

Methods and material for containment and cleaning up

Methods for cleaning up In dusty environments, use vacuum equipment where possible to minimize dust levels.

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Assure proper respiratory protection if dust potential exceeds PEL/TLV.

Conditions for safe storage, including any incompatibilities

Storage precautions To ensure optimum product performance; when packaging is removed or opened; products should be stored inside or covered to protect them from ingress of rain water or snow. Storage arrangements should ensure stability of stacked products and use on a first in first out basis (FIFO) is recommended.

Specific end uses(s)

Specific end use(s) Thermal and/or acoustic insulation for use in technical applications, industrial applications and in building construction.

Glass Mineral Wool Insulation (Brown)

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Biosoluble glass mineral wool

Long-term exposure limit (8-hour TWA): ACGIH, (Notes: (A3)) 1 f/cc Glass wool fibers
Long-term exposure limit (8-hour TWA): NIOSH 5 mg/m³ Mineral wool fiber, total particulate
Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ Particulates not otherwise regulated (PNOR), respirable fraction
Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ Particulates not otherwise regulated (PNOR), total dust

ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.

NIOSH = The National Institute for Occupational Safety and Health.

Ingredient comments

(A3) - Fibers longer than 5 µm; diameter less than 3 µm; aspect ratio greater than 5:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination.
Biosoluble glass mineral wool - See section 3.

Exposure controls

Appropriate engineering controls

Maintain sufficient mechanical or natural ventilation to assure fiber concentrations remain below PEL/TLV. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices.

Eye/face protection

Use glasses or goggles when working with mineral wool insulation above shoulder height or in dusty environments.

Other skin and body protection

Minimize direct contact with skin in order to prevent mechanical itching.

Hygiene measures

After contact with the product, rinse skin in cold water to reduce potential effects of mechanical itching.

Respiratory protection

In dusty environments, use suitable respiratory protection.

Thermal hazards

Not relevant.

*** Heat-Up Precautions:**

When heated to temperatures above 400°F for the first time, release of binder components and binder decomposition products can occur which, in high concentrations, may irritate eyes and the respiratory system. The duration of release is dependant upon the thickness of the insulation, binder content and the temperature applied. Adequate ventilation should be provided. In confined spaces or where ventilation is not possible, occupants should wear appropriate self-contained breathing apparatus.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance

Solid.
Rolls. Panel. Loose fiber.

Color

Brown.

Odor

Not relevant.

Odor threshold

No data available.

pH

Not relevant.

Melting point

Not relevant.

Initial boiling point and range

Not relevant.

Glass Mineral Wool Insulation (Brown)

Flash point	Not relevant.
Evaporation rate	Not relevant.
Flammability (solid, gas)	Not relevant.
Upper/lower flammability or explosive limits	Not relevant.
Vapor pressure	Not relevant.
Vapor density	Not relevant.
Relative density	7 - 96 kg/m³
Solubility(ies)	Generally chemically inert and insoluble in water.
Partition coefficient	Not relevant.
Auto-ignition temperature	Not relevant.
Decomposition Temperature	Not relevant.
Viscosity	Not relevant.
Explosive properties	Not relevant.
Oxidizing properties	Not relevant.
Nominal diameter of fibers.	3 - 8µm
Length weight geometric mean diameter less 2 standard errors	< 6 µm
Orientation of fibers	Random

10. Stability and reactivity

Reactivity	None.
Stability	Binder will decompose above 400°F
Possibility of hazardous reactions	None.
Conditions to avoid	Heating above 400°F
Materials to avoid	Hydrofluoric acid will react with and dissolve glass.
Hazardous decomposition products	None in normal conditions of use. When heated to temperatures above 400°F for the first time, release of binder components and binder decomposition products can occur which, in high concentrations, may irritate eyes and the respiratory system. The duration of release is dependant upon the thickness of the insulation, binder content and the temperature applied. Adequate ventilation should be provided. In confined spaces or where ventilation is not possible, occupants should wear appropriate self-contained breathing apparatus.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Glass Mineral Wool Insulation (Brown)

Notes (oral LD_{50})	No data were identified for the product as a whole. Data are for constituents: Biosoluble glass mineral wool - Not applicable. Thermo set, inert polymer bonding agent derived from plant starches. - Not applicable.

Acute toxicity - dermal

Notes (dermal LD_{50})	No data were identified for the product as a whole. Data are for constituents: Biosoluble glass mineral wool - Not applicable. Thermo set, inert polymer bonding agent derived from plant starches. - Not applicable.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	No data were identified for the product as a whole. Data are for constituents: Biosoluble glass mineral wool - Not applicable. Thermo set, inert polymer bonding agent derived from plant starches. - Not applicable.

Skin corrosion/irritation

Skin corrosion/irritation	May cause mechanical irritation to skin.

Serious eye damage/irritation

Serious eye damage/irritation	May cause mechanical irritation to eyes.

Respiratory sensitization

Respiratory sensitization	No data were identified for this product or its constituents.

Skin sensitization

Skin sensitization	No data were identified for this product or its constituents.

Germ cell mutagenicity

Genotoxicity - in vitro	No data were identified for this product or its constituents.
Genotoxicity - in vivo	No data were identified for this product or its constituents.

Carcinogenicity

Carcinogenicity	Results from a biopersistence test by intratracheal instillation has shown that fibers in this product longer than 20 µm have a weighted half-life less than 40 days, thus this product is not classified as a carcinogen. None of the components of this product are listed as a carcinogen by OSHA, IARC or NTP.

Reproductive toxicity

Reproductive toxicity - fertility	No data available for this product or its constituents.
Reproductive toxicity - development	No data available for this product or its constituents.

Specific target organ toxicity - single exposure

STOT - single exposure	No data were identified for this product or its constituents.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	No data were identified for this product or its constituents.

Aspiration hazard

Aspiration hazard	Not relevant.

Inhalation	Mechanical irritation to upper respiratory tract.
Ingestion	Non-hazardous when ingested.
Skin Contact	Mechanical irritation to skin.
Eye contact	Mechanical irritation to eyes.

Glass Mineral Wool Insulation (Brown)

Medical Symptoms Contact with skin, eyes and upper respiratory system may cause mechanical irritation. Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

12. Ecological Information

Toxicity This product is not ecotoxic to air, water or soil, by composition.

Persistence and degradability

Persistence and degradability Inert inorganic product with Thermo set, inert polymer bonding agent derived from plant starches; 0 - 13%

Bioaccumulative potential

Bio-Accumulative Potential Will not bioaccumulate.

Partition coefficient Not relevant.

Mobility in soil

Mobility Not considered mobile. Less than 1% leachable organic carbon if landfilled.

Other adverse effects

Other adverse effects None known.

13. Disposal considerations

Waste treatment methods

General information Dispose of in accordance with all applicable regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Disposal methods This product is not regulated under RCRA Hazardous Waste Regulations. May be disposed in landfill. If unsure, contact the local office of the USEPA, your local public health department or the local landfill regulators.

14. Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number

Not applicable.

UN proper shipping name

Not applicable.

Transport hazard class(es)

No transport warning sign required.

Packing group

Not applicable.

Environmental hazards

Environmentally Hazardous Substance
No.

Special precautions for user

Not applicable.

Glass Mineral Wool Insulation (Brown)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Regulatory Status This product is regulated as a nuisance dust under OSHA criteria.
In accordance with industry practice, Manson Insulation has decided to continue to provide its customers with the appropriate information for the purpose of assuring safe handling and use of mineral wool throughout the product life.

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
Not regulated.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
Not regulated.

SARA 313 Emission Reporting
Not listed.

SARA (311/312) Hazard Categories
Not regulated.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
This product is exempt from labeling requirements under this Act.

Inventories

US - TSCA
All the ingredients are listed or exempt.

16. Other information

Abbreviations and acronyms used in the safety data sheet
CAS: Chemical Abstracts Service.
IARC: International Agency for Research on Cancer.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
NIOSH: The National Institute for Occupational Safety and Health.
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic substance.
PEL: Permissible Exposure Limit.
SARA: Superfund Amendments and Reauthorization Act.
TLV: Threshold Limit Value.
TSCA: Toxic Substances Control Act.
USEPA: United States Environmental Protection Agency.
vPvB: Very Persistent and Very Bioaccumulative.

General information All products manufactured by Manson Insulation are made of non-classified fibers and are certified by EUCEB. Products meeting EUCEB certification requirements can be recognised by the EUCEB logo printed on the packaging.

Glass Mineral Wool Insulation (Brown)

Further information can be obtained from:

www.euceb.org www.imanson.com

Revision comments	§1 [CA, US]
Supersedes date	9/27/2016
Revision date	5/30/2018
Revision	2.1
SDS No.	4616
Other information	In 2001, the International Agency for Research on Cancer (IARC) reclassified glass mineral wool fibres from Group 2B (possibly carcinogenic) to Group 3 «agent which cannot be classified as for their carcinogenicity to humans». (See Monograph Vol 81, http://monographs.iarc.fr/)

This Safety Data Sheet / Product Data Sheet does not constitute a workplace assessment.
Information contained in this document represents the state of our knowledge regarding this product as of the date of issue of the document. Attention of users is drawn to possible risks taken when the product is used for other applications than the ones it has been designed for.

SAFETY DATA SHEET
Glass Mineral Wool Insulation (Yellow)

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name Glass Mineral Wool Insulation (Yellow)

Product number MA_DP_107

Synonyms; trade names Alley-K™Pipe Insulation*, Alley-K™ASJ Pipe Insulation*, Alley-Wrap™, AK- 110™, Alley-Wrap™FSK, AK Board™, AK Board™FSK, FDM, AK Blanket™, AK Flex™, Unfaced Metal Building Insulation, Alley-Kat Air Duct Board™, High Temperature Blanket, High Temperature Batt, High Temperature HD Blanket, High Temperature Panel, High Temperature Board (*See section 2, 8, 10)

Revision date: 10/04/2016

Recommended use of the chemical and restrictions on use

Application Thermal and/or acoustic insulation for use in technical applications, industrial applications and in building construction.

Uses advised against None known.

Details of the supplier of the safety data sheet

Supplier
Manson Insulation Products Ltd
One Knauf Drive
IN 46176-1 Shelbyville
800 825 4434
www.imanson.com
sds@knaufinsulation.com

Region: United States, Central & South America

Emergency telephone number

Emergency telephone 24hrs: Chemtrec Tel: 800 424 9300

Glass Mineral Wool Insulation (Yellow)

2. Hazard(s) identification

Classification of the substance or mixture

OSHA Regulatory Status This product is regulated as a nuisance dust under OSHA criteria.

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Label elements

Hazard statements NC Not Classified

Contains None.

Hazard pictogram None.

Signal word None.

Precautionary statements None.

Supplemental label information None.

The following sentences and pictograms are printed on packaging:
The mechanical effect of fibers in contact with skin may cause temporary itching.

http://www.knaufinsulation.com/comfort-and-handling

Other hazards

Physical Hazards None.

Health Hazards Mechanical irritation of the skin, eyes and upper respiratory system.

Environmental Hazards None.

Main symptoms Contact with skin, eyes and upper respiratory system may cause mechanical irritation. Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

***Heat-Up Precautions** When heated to temperatures above 400°F for the first time, release of binder components and binder decomposition products can occur which, in high concentrations, may irritate eyes and the respiratory system. See section 8 & 10

Glass Mineral Wool Insulation (Yellow)

3. Composition/information on ingredients

Mixtures

Biosoluble glass mineral wool **83 - 97%**

CAS number: —

Ingredient notes:(1)(2)

Classification
Not Classified

Thermo set, inert polymer based on cured phenol formaldehyde resin **3 - 17%**

CAS number: —

Classification
Not Classified

Formaldehyde **<0.1%**

CAS number: 50-00-0

Classification
Acute Tox. 3 - H301
Acute Tox. 3 - H311
Acute Tox. 2 - H330
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1 - H317
Muta. 2 - H341
Carc. 1B - H350
STOT SE 3 - H335

The full text for all hazard statements is displayed in Section 16.

Ingredient notes

(1) Man made vitreous (silicate) fibers with random orientation with alkaline oxide and alkali earth oxide ($Na_2O+K_2O+CaO+MgO+BaO$) content greater than 18% by weight meeting the requirements of Note Q of regulation n° 1272/2008 and therefore not classified carcinogenicity.

(2) All Knauf Insulation products covered by this SDS are independently certified by EUCEB to be manufactured using biosoluble glass formulations and thus exempt from labeling under NTP or California Prop 65 requirements.

Specific chemical identity and/or exact percent concentration is withheld as trade secret.

Glass Mineral Wool Insulation (Yellow)

4. First-aid measures

Description of first aid measures

General information Show this Safety Data Sheet to the medical professional in attendance. If symptoms occur, follow first aid measures as appropriate.

Notes to Physician: No specific recommendations.

Inhalation Remove from exposure. Rinse the throat and clear dust from airways.

Ingestion Drink plenty of water if accidentally ingested.

Skin Contact If mechanical irritation occurs, remove contaminated clothing and wash skin gently with cold water and soap.

Eye contact Rinse abundantly with water for at least 15 minutes.

Most important symptoms and effects, both acute and delayed

General information Contact with skin, eyes and upper respiratory system may cause mechanical irritation. Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

Indication of immediate medical attention and special treatment needed

General information If any adverse reaction or discomfort continues from any of the above exposures, seek professional medical advice.

Specific treatments No specific recommendations.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Water, foam, carbon dioxide (CO2), and dry powder.

Special hazards arising from the substance or mixture

General information Products do not pose a fire hazard in use; however, some packaging materials or facings may be combustible. Products of combustion from product and packaging - carbon dioxide, carbon monoxide and some trace gases such as ammonia, nitrogen oxides and volatile organic substances.

Advice for firefighters

General information In large fires in poorly ventilated areas involving packaging materials respiratory protection / breathing apparatus may be required.

Glass Mineral Wool Insulation (Yellow)

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Minimize direct contact with skin in order to prevent mechanical itching. In dusty environments, use suitable respiratory protection such as 3M 8210, N95 or equivalent. Use glasses or goggles when working with mineral wool insulation above shoulder height or in dusty environments. Where possible, use natural ventilation during installation in order to minimize dust levels.

After contact with the product, rinse skin in cold water to reduce potential effects of mechanical itching. Dispose of surplus product in accordance with local regulations.

Use personal protection recommended in Section 8 of the SDS.

Environmental precautions

Environmental precautions Not relevant.

Methods and material for containment and cleaning up

Methods for cleaning up In dusty environments, use vacuum equipment where possible to minimize dust levels.

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

Usage precautions Assure proper respiratory protection if dust potential exceeds PEL/TLV.

Conditions for safe storage, including any incompatibilities

Storage precautions To ensure optimum product performance; when packaging is removed or opened; products should be stored inside or covered to protect them from ingress of rain water or snow. Storage arrangements should ensure stability of stacked products and use on a first in first out basis (FIFO) is recommended.

Specific end uses(s)

Specific end use(s) Thermal and/or acoustic insulation for use in technical applications, industrial applications and in building construction.

Glass Mineral Wool Insulation (Yellow)

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

Biosoluble glass mineral wool

Long-term exposure limit (8-hour TWA): ACGIH, (Notes: (A3)) 1 f/cc Glass wool fibers
Long-term exposure limit (8-hour TWA): NIOSH 5 mg/m³ Mineral wool fiber, total particulate
Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ Particulates not otherwise regulated (PNOR), respirable fraction
Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ Particulates not otherwise regulated (PNOR), total dust

Formaldehyde

Long-term exposure limit (8-hour TWA): NIOSH, (Notes: Ca, CT) 0.016 ppm
Ceiling exposure limit: NIOSH, (Notes: Ca, CT) 0.1 ppm
Ceiling exposure limit: ACGIH, (Notes: A2, DSens, RSens) 0.3 ppm 0.37 mg/m³
Long-term exposure limit (8-hour TWA): OSHA 0.75 ppm
Short-term exposure limit (15-minute): OSHA 2 ppm

ACGIH = American Conference of Governmental Industrial Hygienists.
OSHA = Occupational Safety and Health Administration.

NIOSH = The National Institute for Occupational Safety and Health.

Ingredient comments

(A3) - Fibers longer than 5 µm; diameter less than 3 µm; aspect ratio greater than 5:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination.
Biosoluble glass mineral wool - See section 3.
Ca = Potential occupational carcinogen
CT = Ceiling time.
DSens = Dermal sensitizer.
RSens = Respiratory sensitizer.
A2 = Suspected Human Carcinogen.

Formaldehyde (CAS: 50-00-0)

Immediate danger to life and health 20 ppm

Exposure controls

Appropriate engineering controls

Maintain sufficient mechanical or natural ventilation to assure fiber concentrations remain below PEL/TLV. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices.

Eye/face protection

Use glasses or goggles when working with mineral wool insulation above shoulder height or in dusty environments.

Other skin and body protection

Minimize direct contact with skin in order to prevent mechanical itching.

Hygiene measures

After contact with the product, rinse skin in cold water to reduce potential effects of mechanical itching.

Respiratory protection

In dusty environments, use suitable respiratory protection.

Environmental exposure controls

Not relevant.

Glass Mineral Wool Insulation (Yellow)

*** Heat-Up Precautions:**	When heated to temperatures above 400°F for the first time, release of binder components and binder decomposition products can occur which, in high concentrations, may irritate eyes and the respiratory system. The duration of release is dependant upon the thickness of the insulation, binder content and the temperature applied. Adequate ventilation should be provided. In confined spaces or where ventilation is not possible, occupants should wear appropriate self-contained breathing apparatus.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance	Solid. Rolls. Panel. Loose fiber.
Color	Yellow.
Odor	Not relevant.
Odor threshold	No data available.
pH	Not relevant.
Melting point	Not relevant.
Initial boiling point and range	Not relevant.
Flash point	Not relevant.
Evaporation rate	Not relevant.
Flammability (solid, gas)	Not relevant.
Upper/lower flammability or explosive limits	Not relevant.
Vapor pressure	Not relevant.
Vapor density	Not relevant.
Relative density	7 - 96 kg/m³
Solubility(ies)	Generally chemically inert and insoluble in water.
Partition coefficient	Not relevant.
Auto-ignition temperature	Not relevant.
Decomposition Temperature	Not relevant.
Viscosity	Not relevant.
Explosive properties	Not relevant.
Oxidizing properties	Not relevant.
Nominal diameter of fibers.	3 - 8µm
Length weight geometric mean diameter less 2 standard errors	< 6 µm
Orientation of fibers	Random

10. Stability and reactivity

Reactivity	None.

Glass Mineral Wool Insulation (Yellow)

Stability	Binder will decompose above 400°F
Possibility of hazardous reactions	None.
Conditions to avoid	Heating above 400°F
Materials to avoid	Hydrofluoric acid will react with and dissolve glass.
Hazardous decomposition products	None in normal conditions of use. When heated to temperatures above 400°F for the first time, release of binder components and binder decomposition products can occur which, in high concentrations, may irritate eyes and the respiratory system. The duration of release is dependant upon the thickness of the insulation, binder content and the temperature applied.

11. Toxicological information

Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50})	No data were identified for the product as a whole. Data are for constituents: Biosoluble glass mineral wool - Not applicable. Thermo set, inert polymer based on cured phenol formaldehyde resins. - Not applicable.

Acute toxicity - dermal

Notes (dermal LD_{50})	No data were identified for the product as a whole. Data are for constituents: Biosoluble glass mineral wool - Not applicable. Thermo set, inert polymer based on cured phenol formaldehyde resins. - Not applicable.

Acute toxicity - inhalation

Notes (inhalation LC_{50})	No data were identified for the product as a whole. Data are for constituents: Biosoluble glass mineral wool - Not applicable. Thermo set, inert polymer based on cured phenol formaldehyde resins. - Not applicable.

Skin corrosion/irritation

Skin corrosion/irritation	May cause mechanical irritation to skin.

Serious eye damage/irritation

Serious eye damage/irritation	May cause mechanical irritation to eyes.

Respiratory sensitization

Respiratory sensitization	No data were identified for this product or its constituents.

Skin sensitization

Skin sensitization	No data were identified for this product or its constituents.

Germ cell mutagenicity

Genotoxicity - in vitro	No data were identified for this product or its constituents.
Genotoxicity - in vivo	No data were identified for this product or its constituents.

Carcinogenicity

Carcinogenicity	Results from a biopersistence test by intratracheal instillation has shown that fibers in this product longer than 20 µm have a weighted half-life less than 40 days, thus this product is not classified as a carcinogen. None of the components of this product are listed as a carcinogen by OSHA, IARC or NTP.

Reproductive toxicity

Reproductive toxicity - fertility	No data available for this product or its constituents.

Glass Mineral Wool Insulation (Yellow)

Reproductive toxicity - development	No data available for this product or its constituents.

Specific target organ toxicity - single exposure

STOT - single exposure	No data were identified for this product or its constituents.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	No data were identified for this product or its constituents.

Aspiration hazard

Aspiration hazard	Not relevant.

Inhalation	Mechanical irritation to upper respiratory tract.
Ingestion	Non-hazardous when ingested.
Skin Contact	Mechanical irritation to skin.
Eye contact	Mechanical irritation to eyes.
Medical Symptoms	Contact with skin, eyes and upper respiratory system may cause mechanical irritation. Biosoluble glass mineral wool is classified as a nuisance dust by OSHA.

12. Ecological Information

Toxicity

Toxicity	This product is not ecotoxic to air, water or soil, by composition.

Persistence and degradability

Persistence and degradability	Inert inorganic product with Thermo set, inert polymer based on cured phenol formaldehyde resins; 3 - 17%

Bioaccumulative potential

Bio-Accumulative Potential	Will not bioaccumulate.
Partition coefficient	Not relevant.

Mobility in soil

Mobility	Not considered mobile. Less than 1% leachable organic carbon if landfilled.

Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	Not relevant.

Other adverse effects

Other adverse effects	None known.

13. Disposal considerations

Waste treatment methods

General information	Dispose of in accordance with all applicable regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.
Disposal methods	This product is not regulated under RCRA Hazardous Waste Regulations. May be disposed in landfill. If unsure, contact the local office of the USEPA, your local public health department or the local landfill regulators.

14. Transport information

Glass Mineral Wool Insulation (Yellow)

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DoT).

UN Number

Not applicable.

UN proper shipping name

Not applicable.

Transport hazard class(es)

No transport warning sign required.

Packing group

Not applicable.

Environmental hazards

Environmentally Hazardous Substance
No.

Special precautions for user

Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Regulatory Status This product is regulated as a nuisance dust under OSHA criteria.
In accordance with industry practice, Manson Insulation has decided to continue to provide its customers with the appropriate information for the purpose of assuring safe handling and use of mineral wool throughout the product life.

International Regulations

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities
Not regulated.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)
Not regulated.

SARA 313 Emission Reporting
Not listed.

SARA (311/312) Hazard Categories
Not regulated.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins
This product is exempt from labeling requirements under this Act.

Inventories

US - TSCA
All the ingredients are listed or exempt.

Glass Mineral Wool Insulation (Yellow)

16. Other information

Abbreviations and acronyms used in the safety data sheet

CAS: Chemical Abstracts Service.
IARC: International Agency for Research on Cancer.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
NIOSH: The National Institute for Occupational Safety and Health.
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic substance.
PEL: Permissible Exposure Limit.
SARA: Superfund Amendments and Reauthorization Act.
TLV: Threshold Limit Value.
TSCA: Toxic Substances Control Act.
USEPA: United States Environmental Protection Agency.
vPvB: Very Persistent and Very Bioaccumulative.

General information

All products manufactured by Manson Insulation are made of non-classified fibers and are certified by EUCEB. Products meeting EUCEB certification requirements can be recognised by the EUCEB logo printed on the packaging.

Further information can be obtained from:

www.euceb.org www.imanson.com

Revision comments

New document format

Revision date

10/4/2016

Revision

2.0

SDS No.

MA_DP_107

Hazard statements in full

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H350 May cause cancer.

Other information

In 2001, the International Agency for Research on Cancer (IARC) reclassified glass mineral wool fibres from Group 2B (possibly carcinogenic) to Group 3 «agent which cannot be classified as for their carcinogenicity to humans». (See Monograph Vol 81, http://monographs.iarc.fr/)

This Safety Data Sheet / Product Data Sheet does not constitute a workplace assessment.
Information contained in this document represents the state of our knowledge regarding this product as of the date of issue of the document. Attention of users is drawn to possible risks taken when the product is used for other applications than the ones it has been designed for.

SAFETY DATA SHEET

SECTION I: IDENTIFICATION

Product name: MASTERS® ALL CONDITION SOLDERING PASTE
Product use: Soldering Paste.

Supplier name and address:
G.F. THOMPSON CO. LTD.
620 Steven Court, Unit 11
Newmarket, Ontario
L3Y 6Z2

Manufacturer name and address:
Refer to supplier.

Emergency Tel:
Mon – Fri, 7:30 am to 5:00 pm EST
905-898-2557
800-499-3673 (toll free)
24 hr Emergency Tel:
905-252-6219 or 647-448-2050

SECTION II: HAZARDS IDENTIFICATION

Classification of the chemical

Light brownish to white paste. Slight petroleum odour.

Most important hazards:
May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS. Very toxic to aquatic life with long lasting effects. Avoid release to the environment. See Section 12 for more environmental information.

This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).
Classification:
Skin corrosion/irritation - Category 1C
Eye damage/irritation - Category 1
Hazards Not Otherwise Classified (HNOC) / Health Hazards Not Otherwise Classified (Respiratory Tract)

Label elements

Hazard pictogram(s)

Signal Word
DANGER!

Hazard statement(s)
Causes severe skin burns and eye damage.
Corrosive to the respiratory tract.

Precautionary statement(s)
Do not breathe fumes, mists or vapours.
Wash exposed skin thoroughly after handling.
Wear protective gloves/clothing and eye/face protection.

Immediately call a POISON CENTER or doctor/physician.
If swallowed: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards

Other hazards which do not result in classification:
Toxic fumes may be released during a fire. May be mildly corrosive to some metals. May cause irritation and burns to mouth and throat.

Environmental precautions:
Very toxic to aquatic life with long lasting effects. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.

SECTION III: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
Zinc chloride	Zinc chloride, anhydrous	7646-85-7	**18.97**
Ammonium chloride	Ammonium muriate	12125-02-9	**1.8**

SECTION IV:. FIRST-AID MEASURES

Description of first aid measures

Ingestion : If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Never give anything by mouth to an unconscious person.

Inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Immediately call a POISON CENTER or doctor/physician.

Skin contact : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

Eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Flush eyes with water for at least 20 minutes. Protect unharmed eye. Do not rub area of contact. Immediately call a POISON CENTER or doctor/physician.

Most important symptoms and effects, both acute and delayed

: Causes skin burns. Symptoms may include blistering, ulcerations and scarring.
Causes serious eye damage. Symptoms may include stinging, tearing, redness and swelling. May cause irreversible eye damage.
Corrosive to the respiratory tract. May produce irritation, burning, or destruction of tissues in the respiratory tract, characterized by coughing, choking, pain, or shortness of breath.
May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include severe abdominal pain, vomiting, burns and bleeding.

Indication of any immediate medical attention and special treatment needed

: Provide general supportive measures and treat symptomatically.

SECTION V: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.

Unsuitable extinguishing media

: None known.

Special hazards arising from the substance or mixture / Conditions of flammability

: Not considered flammable. However, may burn if exposed to extreme heat and flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Hazardous combustion products

: Carbon oxides; Hydrogen chloride gas; Zinc oxide; Ammonia; Nitrogen oxides (NOx); Other irritating fumes and smoke.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Normal protective clothing (bunker gear) may not be adequate. A full-body encapsulating chemical protective suit may be necessary.

Special fire-fighting procedures

: Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION VI: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: All persons dealing with the clean-up should wear the appropriate chemically protective equipment. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply. Avoid release to the environment.

Methods and material for containment and cleaning up

: Ventilate the area. Prevent further leakage or spillage if safe to do so. Eliminate all ignition sources. Paste: Use inert, non-combustible absorbents to assist the pick up of material. Scrape up product and place it into a container for disposal.
dusts: Collect dust using a vacuum cleaner equipped with HEPA filter. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Keep in properly labelled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Refer to Section 13 for disposal of contaminated material. Contact the proper local authorities.

SECTION VII: HANDLING AND STORAGE

Precautions for safe handling

: Use with adequate ventilation. Wear protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Do not breathe fumes, mists or vapours. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and direct flame. Keep away from incompatibles. Keep container tightly closed when not in use. Wash thoroughly after handling. Empty containers retain residue and can be dangerous.

Conditions for safe storage : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Store locked up. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. May be mildly corrosive to some metals.

Incompatible materials : Strong bases; Alkali metals (e.g. Sodium; Potassium); Strong acids; Turpentine; Cyanides; Sulfides; Halogenated compounds; Lead and silver salts; Metals

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Zinc chloride	1 mg/m³ (fume)	2 mg/m³ (fume)	1 mg/m³ (fume)	N/Av
Ammonium chloride	10 mg/m³ (fume)	20 mg/m³ (fume)	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

: Provide adequate ventilation. Local ventilation is recommended if the product is misted or used in a confined space, or if the TLV is exceeded.

Respiratory protection : If airbourne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with CSA Z94.4-02.

Skin protection : Wear protective gloves/clothing. Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye / face protection : Wear eye/face protection. Wear as appropriate: Safety glasses with side shields; Tightly fitting safety goggles. A full face shield may also be necessary.

Other protective equipment : An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Do not breathe fumes, mists or vapours. Avoid contact with skin, eyes and clothing. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse. Handle in accordance with good industrial hygiene and safety practice.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Light brownish to white paste.

Odour : Slight petroleum odour.

Odour threshold : N/Av

pH : N/Av

Melting/Freezing point : 35°C (95°F) (Melting point)

Initial boiling point and boiling range

: N/Av

Flash point : 182 - 221°C (360 - 430°F)

Flashpoint (Method) : Tag closed cup

Evaporation rate (BuAe = 1) : N/Av

Flammability (solid, gas) : Not considered flammable.

Lower flammable limit (% by vol.)

: N/Av

Upper flammable limit (% by vol.)

: N/Av

Oxidizing properties : None known.

Explosive properties : Not explosive

Vapour pressure : N/Av

Vapour density : N/Av

Relative density / Specific gravity

: 0.87 @ 15.6°C (60°F)

Solubility in water : Insoluble.

Other solubility(ies) : N/Av

Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: N/Av

Auto-ignition temperature : N/Av

Decomposition temperature : N/Av

Viscosity : N/Av

Volatiles (% by weight) : < 1%

Volatile organic Compounds (VOC's)

: 11.7 g/L

Absolute pressure of container

: N/Ap

Flame projection length : N/Ap

Other physical/chemical comments

: No additional information.

SECTION X: STABILITY AND REACTIVITY

Reactivity : Not normally reactive. May be corrosive to metals such as copper and its alloys (e.g. brass, bronze), aluminum, ferrous metals (e.g. cast iron), carbon steel and some stainless steels (e.g. 303, 310, 321, 400 series). Contact with acids may evolve Hydrogen chloride gas. Contact with strong alkalies may evolve ammonia gas.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions

: Hazardous polymerization does not occur.

Conditions to avoid : Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials. Avoid heat and open flame.

Incompatible materials : Strong bases; Alkali metals (e.g. Sodium; Potassium); Strong acids; Turpentine; Cyanides; Sulfides; Halogenated compounds; Lead and silver salts; Metals

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION XI: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption

: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: Corrosive to the respiratory tract. May produce irritation, burning, or destruction of tissues in the respiratory tract, characterized by coughing, choking, pain, or shortness of breath.

Sign and symptoms ingestion

: May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include severe abdominal pain, vomiting, burns and bleeding.

Sign and symptoms skin : Causes skin burns. Symptoms may include blistering, ulcerations and scarring.

Sign and symptoms eyes : Causes serious eye damage. Symptoms may include stinging, tearing, redness and swelling. May cause irreversible eye damage.

Potential Chronic Health Effects

: Chronic skin contact with low concentrations may cause dermatitis.

Mutagenicity : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

: This product is not expected to cause reproductive or developmental effects.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : According to the classification criteria of Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015), this product is not expected to cause specific target organ toxicity (STOT) through single or repeated exposures.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials : None known or reported by the manufacturer.

Toxicological data : Not classified for acute toxicity based on available data. The calculated ATE values for this mixture are:
ATE oral = 5342 mg/kg

See below for individual ingredient acute toxicity data.

Chemical name	LC_{50} (4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Zinc chloride	N/Av	1100 mg/kg	> 2000 mg/kg (No mortality)
Ammonium chloride	N/Av	1220 mg/kg	> 2000 mg/kg (No mortality)

Other important toxicological hazards
: None known or reported by the manufacturer.

SECTION XII: ECOLOGICAL INFORMATION

Refer to the supplier for Ecological Information

SECTION XIII: DISPOSAL CONSIDERATIONS

Refer to the supplier for Disposal Considerations

SECTION XIV: TRANSPORTATION INFORMATION

Refer to the supplier for Transportation Information

SECTION XV: REGULATORY INFORMATION

Refer to the supplier for Regulatory Information

SECTION XVI: OTHER INFORMATION

Prepared for: G. F. Thompson Co. Ltd
Telephone No.: 905-898-2557
Preparation date: May 30, 2017

SDS – SAFETY DATA SHEET

SECTION I: IDENTIFICATION

Product name: MASTERS® NO LEAK™
Product use: Pipe thread and gasket sealant

Supplier name and address:
G.F. THOMPSON CO. LTD.
620 Steven Court, Unit 11
Newmarket, Ontario
L3Y 6Z2

Manufacturer name and address:
Refer to supplier.

Emergency Tel:
Mon – Fri, 7:30 am to 5:00 pm EST
905-898-2557
800-499-3673 (toll free)
24 hr Emergency Tel:
905-252-6219 or 647-448-2050

SECTION II: HAZARDS IDENTIFICATION

Classification of the chemical

Light brown paste. Alcohol odour.

Most important hazards:
Flammable liquid and vapour. This material may be ignited by heat, sparks and direct flame.
May cause cancer. Causes damage to organs through prolonged or repeated exposure. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.

This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).
Classification:
- Flammable liquid - Category 3
- Carcinogenicity - Category 1
- Specific target organ toxicity, repeated exposure - Category 1

Label elements

Hazard pictogram(s)

Signal Word

DANGER!

Hazard statement(s)

Flammable liquid and vapour.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical and ventilating equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust, fume or vapor.
Wash exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/clothing and eye/face protection.

IF exposed or concerned: Get medical advice/attention.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use carbon dioxide, dry chemical or foam to extinguish.

Store in a well-ventilated place. Keep cool.
Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards

Other hazards which do not result in classification:
Toxic fumes, gases or vapours may evolve on burning. May be mildly irritating to skin, eyes and respiratory system. May cause gastrointestinal irritation. In extremely high concentrations, may cause symptoms of central nervous system depression.

Environmental precautions:
Avoid release to the environment. See Section 12 for more environmental information.

SECTION III: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
n-Butyl alcohol	n-Butanol 1-Hydroxybutane	71-36-3	**5.0**
Crystalline silica, quartz	Quartz silica Crystallized silicon dioxide	14808-60-7	**0.132**

SECTION IV: FIRST-AID MEASURES

Description of first aid measures

Ingestion : Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

Inhalation : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing is irregular or stopped, administer artificial respiration. IF exposed or concerned: Get medical advice/attention.

Skin contact : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF exposed or concerned: Get medical advice/attention. Launder clothing before reuse.

Eye contact : Rinse immediately with plenty of water, also under the eyelids. IF exposed or concerned: Get medical advice/attention.

Most important symptoms and effects, both acute and delayed

: May cause cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.
Causes damage to organs through prolonged or repeated exposure. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Repeated or prolonged inhalation of fine dusts may cause severe scarring of the lungs, a disease called silicosis, and alveolar proteinosis (lower lung disease). Symptoms may include coughing, shortness of breath and eventually severe respiratory impairment.
May be mildly irritating to skin, eyes and respiratory system. Exposure may cause temporary irritation, redness or discomfort.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
In extremely high concentrations, may also cause nausea, vomiting, dizziness, drowsiness and other symptoms of central nervous system depression.

Indication of any immediate medical attention and special treatment needed

: Provide general supportive measures and treat symptomatically.

SECTION V: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Use water fog or fine spray, foams, carbon dioxide or dry chemical.

Unsuitable extinguishing media

: Do not use water jet, as this may spread burning material.

Special hazards arising from the substance or mixture / Conditions of flammability

: Flammable liquid and vapour. This material may be ignited by heat, sparks and direct flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Toxic fumes, gases or vapours may evolve on burning.

Hazardous combustion products

: Carbon oxides; Aldehydes; Acids; unburned alcohols; Other unidentified organic compounds.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special fire-fighting procedures

: Move containers from fire area if safe to do so. Use water spray to cool unopened containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION VI: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: All persons dealing with the clean-up should wear the appropriate personal protective equipment. Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Prevent product from entering drains, sewers, waterways and soil. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up

: Ventilate the area. Prevent further leakage or spillage if safe to do so. Eliminate all ignition sources. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Pick up and transfer to properly labeled containers. Do not use combustible absorbents, such as sawdust. Contaminated absorbent material may pose the same hazards as the spilled product. Refer to Section 13 for disposal of contaminated material. Contact the proper local authorities.

SECTION VII: HANDLING AND STORAGE

Precautions for safe handling

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Use with adequate ventilation. Wear suitable protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Do not breathe dust, fume or vapor. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Ground/Bond container and receiving equipment. Use explosion-proof electrical and ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid contact with incompatible materials. Wash thoroughly after handling. Keep container tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Conditions for safe storage : Store in a cool, well-ventilated area. Inspect periodically for damage or leaks. Store away from incompatible materials. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Store locked up.

Incompatible materials : Strong oxidizing agents; Strong acids; Strong bases

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
n-Butyl alcohol	20 ppm	N/Av	100 ppm (300 mg/m³)	N/Av
Crystalline silica, quartz	0.025 mg/m³ (respirable)	N/Av	0.1 mg/m³ (respirable) (final rule limit)	N/Av

Exposure controls

Ventilation and engineering measures

: Use with adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection : If airbourne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

Skin protection : Wear protective gloves/clothing. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear resistant clothing and boots.

Eye / face protection : Wear eye/face protection. Wear as appropriate: Safety glasses with side shields; Tightly fitting safety goggles. A full face shield may also be necessary.

Other protective equipment : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Do not breathe dust, fume or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash hands and face before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Light brown paste.
Odour : Alcohol odour.
Odour threshold : N/Av
pH : N/Av

Melting/Freezing point	:	66 - 160°C (150 - 320°F) (emulsion range)
Initial boiling point and boiling range	:	> 117.7°C (244°F) (based on ingredients)
Flash point	:	47°C (116.6°F)
Flashpoint (Method)	:	closed cup
Evaporation rate (BuAe = 1)	:	N/Av
Flammability (solid, gas)	:	Not applicable.
Lower flammable limit (% by vol.)	:	N/Av
Upper flammable limit (% by vol.)	:	N/Av
Oxidizing properties	:	None known.
Explosive properties	:	Not explosive
Vapour pressure	:	N/Av
Vapour density	:	N/Av
Relative density / Specific gravity	:	1.6
Solubility in water	:	Insoluble.
Other solubility(ies)	:	N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution	:	N/Av
Auto-ignition temperature	:	N/Av
Decomposition temperature	:	N/Av
Viscosity	:	N/Av
Volatiles (% by weight)	:	3.4%
Volatile organic Compounds (VOC's)	:	46.9 g/L
Absolute pressure of container	:	N/Ap
Flame projection length	:	N/Ap
Other physical/chemical comments	:	No additional information.

SECTION X: STABILITY AND REACTIVITY

Reactivity	:	Not normally reactive.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	Do not use in areas without adequate ventilation. Avoid contact with incompatible materials. Avoid heat and open flame.
Incompatible materials	:	Strong oxidizing agents; Strong acids; Strong bases
Hazardous decomposition products	:	None known, refer to hazardous combustion products in Section 5.

SECTION XI: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation	:	YES
Routes of entry skin & eye	:	YES
Routes of entry Ingestion	:	YES
Routes of exposure skin absorption	:	NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: Mild respiratory irritant. May cause coughing and breathing difficulties. In extremely high concentrations, may also cause nausea, vomiting, dizziness, drowsiness and other symptoms of central nervous system depression.

Sign and symptoms ingestion

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin : Direct skin contact may result in little or no irritation. Direct skin contact may cause temporary redness.

Sign and symptoms eyes : Direct eye contact may cause slight or mild, transient irritation. Direct eye contact may cause temporary redness.

Potential Chronic Health Effects

: Pneumoconiosis, or "dusty lung" disease, may result from chronic exposure to any dust. Repeated or prolonged inhalation of fine dusts may cause an increase in mucous production.

Mutagenicity : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity : This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Carcinogenicity - Category 1. May cause cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.
Contains: Crystalline silica, quartz. Crystalline silica is classified as carcinogenic by IARC (Group 1), the ACGIH (Category A2) and the NTP (Group 1 - Known human carcinogen).

Reproductive effects & Teratogenicity

: This product is not expected to cause reproductive or developmental effects.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Specific target organ toxicity, repeated exposure - Category 1. Causes damage to organs through prolonged or repeated exposure.
Contains: Crystalline silica, quartz. If dusts are formed, prolonged inhalation may cause scarring of lung tissue, a disease called silicosis. Symptoms may include coughing, shortness of breath and eventually severe respiratory impairment.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye, respiratory and central nervous system disorders.

Synergistic materials : None known or reported by the manufacturer.

Toxicological data : No data is available on the product itself. The calculated ATE values for this mixture are:
ATE oral = 15,800 mg/kg
ATE dermal = 68,040 mg/kg
ATE inhalation (vapours) = 486 mg/L/4H

See below for individual ingredient acute toxicity data.

Chemical name	LC_{50} (4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
n-Butyl alcohol	8000 ppm (24.3 mg/L) (vapour)	790 - 4360 mg/kg	3402 mg/kg
Crystalline silica, quartz	N/Av	N/Av	N/Av

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION XII: ECOLOGICAL INFORMATION

Refer to the supplier for Ecological Information.

SECTION XIII: DISPOSAL CONSIDERATIONS

Refer to the supplier for Disposal Considerations.

SECTION XIV: TRANSPORTATION INFORMATION

Refer to the supplier for Transportation Information.

SECTION XV: REGULATORY INFORMATION

Refer to the supplier for Regulatory Information.

SECTION XVI: OTHER INFORMATION

Prepared by: G. F. Thompson Co. Ltd
Telephone No.: 905-898-2557
Preparation date: **May 30, 2017**

SDS – SAFETY DATA SHEET

SECTION I: IDENTIFICATION

Product name: MASTERS® NON-METALLIC™
Product use: Pipe thread and gasket sealant

Supplier name and address:
G.F. THOMPSON CO. LTD.
620 Steven Court, Unit 11
Newmarket, Ontario
L3Y 6Z2

Manufacturer name and address:
Refer to supplier.

Emergency Tel:
Mon – Fri, 7:30 am to 5:00 pm EST
905-898-2557
800-499-3673 (toll free)
24 hr Emergency Tel:
905-252-6219 or 647-448-2050

SECTION II: HAZARDS IDENTIFICATION

Classification of the chemical

Light brown paste. Alcohol odour.

Most important hazards:
Flammable liquid and vapour. This material may be ignited by heat, sparks and direct flame.
May cause cancer. Causes damage to organs through prolonged or repeated exposure. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.

This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).
Classification:
Flammable liquid - Category 3
Carcinogenicity - Category 1
Specific target organ toxicity, repeated exposure - Category 1

Label elements

Hazard pictogram(s)

Signal Word

DANGER!

Hazard statement(s)

Flammable liquid and vapour.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical and ventilating equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust, fume or vapor.
Wash exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/clothing and eye/face protection.

IF exposed or concerned: Get medical advice/attention.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use carbon dioxide, dry chemical or foam to extinguish.

Store in a well-ventilated place. Keep cool.
Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards

Other hazards which do not result in classification:
Toxic fumes, gases or vapours may evolve on burning. May be mildly irritating to skin, eyes and respiratory system. May cause gastrointestinal irritation. In extremely high concentrations, may cause symptoms of central nervous system depression.

Environmental precautions:
Avoid release to the environment. See Section 12 for more environmental information.

SECTION III: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
n-Butyl alcohol	n-Butanol 1-Hydroxybutane	71-36-3	**5.0**
Crystalline silica, quartz	Quartz silica Crystallized silicon dioxide	14808-60-7	**0.132**

SECTION IV: FIRST-AID MEASURES

Description of first aid measures

Ingestion : Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

Inhalation : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing is irregular or stopped, administer artificial respiration. IF exposed or concerned: Get medical advice/attention.

Skin contact : IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF exposed or concerned: Get medical advice/attention. Launder clothing before reuse.

Eye contact : Rinse immediately with plenty of water, also under the eyelids. IF exposed or concerned: Get medical advice/attention.

Most important symptoms and effects, both acute and delayed

: May cause cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.
Causes damage to organs through prolonged or repeated exposure. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Repeated or prolonged inhalation of fine dusts may cause severe scarring of the lungs, a disease called silicosis, and alveolar proteinosis (lower lung disease). Symptoms may include coughing, shortness of breath and eventually severe respiratory impairment.
May be mildly irritating to skin, eyes and respiratory system. Exposure may cause temporary irritation, redness or discomfort.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
In extremely high concentrations, may also cause nausea, vomiting, dizziness, drowsiness and other symptoms of central nervous system depression.

Indication of any immediate medical attention and special treatment needed

: Provide general supportive measures and treat symptomatically.

SECTION V: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Use water fog or fine spray, foams, carbon dioxide or dry chemical.

Unsuitable extinguishing media

: Do not use water jet, as this may spread burning material.

Special hazards arising from the substance or mixture / Conditions of flammability

: Flammable liquid and vapour. This material may be ignited by heat, sparks and direct flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Toxic fumes, gases or vapours may evolve on burning.

Hazardous combustion products

: Carbon oxides; Aldehydes; Acids; unburned alcohols; Other unidentified organic compounds.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special fire-fighting procedures

: Move containers from fire area if safe to do so. Use water spray to cool unopened containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION VI: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: All persons dealing with the clean-up should wear the appropriate personal protective equipment. Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Prevent product from entering drains, sewers, waterways and soil. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.

Methods and material for containment and cleaning up

: Ventilate the area. Prevent further leakage or spillage if safe to do so. Eliminate all ignition sources. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Pick up and transfer to properly labeled containers. Do not use combustible absorbents, such as sawdust. Contaminated absorbent material may pose the same hazards as the spilled product. Refer to Section 13 for disposal of contaminated material. Contact the proper local authorities.

SECTION VII: HANDLING AND STORAGE

Precautions for safe handling

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Use with adequate ventilation. Wear suitable protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Do not breathe dust, fume or vapor. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Ground/Bond container and receiving equipment. Use explosion-proof electrical and ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid contact with incompatible materials. Wash thoroughly after handling. Keep container tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Conditions for safe storage : Store in a cool, well-ventilated area. Inspect periodically for damage or leaks. Store away from incompatible materials. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Store locked up.

Incompatible materials : Strong oxidizing agents; Strong acids; Strong bases

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
n-Butyl alcohol	20 ppm	N/Av	100 ppm (300 mg/m³)	N/Av
Crystalline silica, quartz	0.025 mg/m³ (respirable)	N/Av	0.1 mg/m³ (respirable) (final rule limit)	N/Av

Exposure controls

Ventilation and engineering measures

: Use with adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection : If airbourne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

Skin protection : Wear protective gloves/clothing. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear resistant clothing and boots.

Eye / face protection : Wear eye/face protection. Wear as appropriate: Safety glasses with side shields; Tightly fitting safety goggles. A full face shield may also be necessary.

Other protective equipment : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Do not breathe dust, fume or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash hands and face before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Light brown paste.
Odour : Alcohol odour.
Odour threshold : N/Av
pH : N/Av

Melting/Freezing point	:	66 - 160°C (150 - 320°F) (emulsion range)
Initial boiling point and boiling range	:	> 117.7°C (244°F) (based on ingredients)
Flash point	:	47°C (116.6°F)
Flashpoint (Method)	:	closed cup
Evaporation rate (BuAe = 1)	:	N/Av
Flammability (solid, gas)	:	Not applicable.
Lower flammable limit (% by vol.)	:	N/Av
Upper flammable limit (% by vol.)	:	N/Av
Oxidizing properties	:	None known.
Explosive properties	:	Not explosive
Vapour pressure	:	N/Av
Vapour density	:	N/Av
Relative density / Specific gravity	:	1.6
Solubility in water	:	Insoluble.
Other solubility(ies)	:	N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution	:	N/Av
Auto-ignition temperature	:	N/Av
Decomposition temperature	:	N/Av
Viscosity	:	N/Av
Volatiles (% by weight)	:	3.4%
Volatile organic Compounds (VOC's)	:	46.9 g/L
Absolute pressure of container	:	N/Ap
Flame projection length	:	N/Ap
Other physical/chemical comments	:	No additional information.

SECTION X: STABILITY AND REACTIVITY

Reactivity	:	Not normally reactive.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	Do not use in areas without adequate ventilation. Avoid contact with incompatible materials. Avoid heat and open flame.
Incompatible materials	:	Strong oxidizing agents; Strong acids; Strong bases
Hazardous decomposition products	:	None known, refer to hazardous combustion products in Section 5.

SECTION XI: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation	:	YES
Routes of entry skin & eye	:	YES
Routes of entry Ingestion	:	YES
Routes of exposure skin absorption	:	NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: Mild respiratory irritant. May cause coughing and breathing difficulties. In extremely high concentrations, may also cause nausea, vomiting, dizziness, drowsiness and other symptoms of central nervous system depression.

Sign and symptoms ingestion

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin : Direct skin contact may result in little or no irritation. Direct skin contact may cause temporary redness.

Sign and symptoms eyes : Direct eye contact may cause slight or mild, transient irritation. Direct eye contact may cause temporary redness.

Potential Chronic Health Effects

: Pneumoconiosis, or "dusty lung" disease, may result from chronic exposure to any dust. Repeated or prolonged inhalation of fine dusts may cause an increase in mucous production.

Mutagenicity : No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity : This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Carcinogenicity - Category 1. May cause cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.
Contains: Crystalline silica, quartz. Crystalline silica is classified as carcinogenic by IARC (Group 1), the ACGIH (Category A2) and the NTP (Group 1 - Known human carcinogen).

Reproductive effects & Teratogenicity

: This product is not expected to cause reproductive or developmental effects.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Specific target organ toxicity, repeated exposure - Category 1. Causes damage to organs through prolonged or repeated exposure.
Contains: Crystalline silica, quartz. If dusts are formed, prolonged inhalation may cause scarring of lung tissue, a disease called silicosis. Symptoms may include coughing, shortness of breath and eventually severe respiratory impairment.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye, respiratory and central nervous system disorders.

Synergistic materials : None known or reported by the manufacturer.

Toxicological data : No data is available on the product itself. The calculated ATE values for this mixture are:
ATE oral = 15,800 mg/kg
ATE dermal = 68,040 mg/kg
ATE inhalation (vapours) = 486 mg/L/4H

See below for individual ingredient acute toxicity data.

Chemical name	LC_{50} (4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
n-Butyl alcohol	8000 ppm (24.3 mg/L) (vapour)	790 - 4360 mg/kg	3402 mg/kg
Crystalline silica, quartz	N/Av	N/Av	N/Av

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION XII: ECOLOGICAL INFORMATION

Refer to the supplier for Ecological Information.

SECTION XIII: DISPOSAL CONSIDERATIONS

Refer to the supplier for Disposal Considerations.

SECTION XIV: TRANSPORTATION INFORMATION

Refer to the supplier for Transportation Information.

SECTION XV: REGULATORY INFORMATION

Refer to the supplier for Regulatory Information.

SECTION XVI: OTHER INFORMATION

Prepared by: G. F. Thompson Co. Ltd
Telephone No.: 905-898-2557
Preparation date: **May 30, 2017**

Masters Pro-Dope

Oatey

Version No: **1.5**
Safety Data Sheet according to WHMIS 2015 requirements

Issue Date: **12/16/2020**
Print Date: **12/16/2020**
S.GHS.CAN.EN

SECTION 1 Identification

Product Identifier

Product name	Masters Pro-Dope
Synonyms	Not Available
Proper shipping name	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. Isopropanol
Other means of identification	PD250BT, PD500BT, PD1L, PD 20L

Recommended use of the chemical and restrictions on use

Relevant identified uses	Pipe Joint Compound for Threaded Metal Pipes

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	**Oatey**
Address	620 Steven Court, New Market, ON L3Y 622 Canada
Telephone	905-898-2557
Fax	Not Available
Website	Not Available
Email	info@oatey.com

Emergency phone number

Association / Organisation	**ChemTrec**
Emergency telephone numbers	1-800-424-9300 (Outside the US 1-703-527-3887)
Other emergency telephone numbers	Emergency First Aid: 1-877-740-5015

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

Classification	Eye Irritation Category 2A, Skin Corrosion/Irritation Category 2, Carcinogenicity Category 1A, Specific target organ toxicity - repeated exposure Category 1, Flammable Solid Category 1

Label elements

Hazard pictogram(s)	
Signal word	**Danger**

Hazard statement(s)

Page 1 continued...

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H350	May cause cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H228	Flammable solid.

Physical and Health hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260	Do not breathe dust/fume.
P264	Wash thoroughly after handling.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s) Response

P308+P313	IF exposed or concerned: Get medical advice/attention.
P321	Specific treatment (see advice on this label).
P362+P364	Take off contaminated clothing and wash before reuse.
P370+P378	In case of fire: Use water jets for extinction.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314	Get medical advice/attention if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water.
P332+P313	If skin irritation occurs: Get medical advice/attention.

Precautionary statement(s) Storage

P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
14807-96-6*	34	Talc
1332-58-7*	20	Kaolin
13463-67-7*	4.6	Titanium dioxide
13983-17-0*	4.4	Calcium silicate
9002-84-0	1	polytetrafluoroethylene
9004-34-6*	0.7	cellulose
14808-60-7*	<2	silica crystalline - quartz
5131-66-8	10	propylene glycol monobutyl ether - alpha isomer
67-63-0	7	isopropanol

Continued...

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	▸ Immediately give a glass of water. ▸ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media

- Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

For **SMALL FIRES**:
Dry chemical, CO2, water spray or foam.
For **LARGE FIRES**:
Water-spray, fog or foam.

Special hazards arising from the substrate or mixture

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear breathing apparatus plus protective gloves. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ Fight fire from a safe distance, with adequate cover. ▸ If safe, switch off electrical equipment until vapour fire hazard removed. ▸ Use water delivered as a fine spray to control fire and cool adjacent area. ▸ Avoid spraying water onto liquid pools. ▸ **DO NOT** approach containers suspected to be hot. ▸ Cool fire exposed containers with water spray from a protected location. ▸ If safe to do so, remove containers from path of fire.
Fire/Explosion Hazard	▸ Flammable solid which burns and propagates flame easily, even when partly wetted with water. ▸ Any source of ignition, i.e. friction, heat, sparks or flame, may cause fire or explosion. ▸ May burn fiercely ▸ May form explosive mixtures with air. ▸ May **REIGNITE** after fire is extinguished. ▸ Containers may explode on heating. ▸ Solids may melt and flow when heated or involved in a fire. ▸ Runoff may pollute waterways. ▸ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited. ▸ Dry dust can be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport,

Continued...

	thereby providing a source of ignition. ▸ Decomposition products may be irritating, poisonous or corrosive. Combustion products include: carbon monoxide (CO) carbon dioxide (CO2) other pyrolysis products typical of burning organic material.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	▸ Remove all ignition sources. ▸ **DO NOT**touch or walk through spilled material. ▸ Clean up all spills immediately. ▸ Avoid contact with skin and eyes. ▸ With clean shovel (preferably non-sparking) place material into clean, dry container and cover loosely. ▸ Move containers from spill area. ▸ Control personal contact with the substance, by using protective equipment.
Major Spills	▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ **DO NOT** touch or walk through spilled material. ▸ Control personal contact with the substance, by using protective equipment. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ No smoking, naked lights or ignition sources. ▸ Increase ventilation. ▸ Stop leak if safe to do so. ▸ Contain or cover with sand, earth or vermiculite. ▸ Use only spark-free shovels and explosion proof equipment. ▸ Collect recoverable product into labelled containers for recycling. ▸ Collect solid residues and seal in labelled drums for disposal. ▸ Wash area with water and dike for later disposal; prevent runoff into drains. ▸ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. ▸ If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of overexposure occurs. ▸ Use in a well-ventilated area. ▸ Prevent concentration in hollows and sumps. ▸ **DO NOT** enter confined spaces until atmosphere has been checked. ▸ **DO NOT** allow material to contact humans, exposed food or food utensils. ▸ Avoid smoking, naked lights or ignition sources. ▸ When handling, **DO NOT** eat, drink or smoke. ▸ Avoid contact with incompatible materials. ▸ Keep containers securely sealed when not in use. ▸ Avoid physical damage to containers. ▸ Always wash hands with soap and water after handling. ▸ Working clothes should be laundered separately. Launder contaminated clothing before re-use. ▸ Use good occupational work practice. ▸ Observe manufacturer's storage and handling recommendations contained within this SDS. ▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Other information	**FOR MINOR QUANTITIES:** ▸ Store in an indoor fireproof cabinet or in a room of noncombustible construction. ▸ Provide adequate portable fire-extinguishers in or near the storage area.

Continued...

	FOR PACKAGE STORAGE: ▸ Store in original containers in approved flame-proof area. ▸ No smoking, naked lights, heat or ignition sources. ▸ **DO NOT** store in pits, depressions, basements or areas where vapours may be trapped. ▸ Keep containers securely sealed. ▸ Store away from incompatible materials in a cool, dry, well ventilated area. ▸ Protect containers against physical damage and check regularly for leaks. ▸ Protect containers from exposure to weather and from direct sunlight unless: (a) the packages are of metal or plastic construction; (b) the packages are securely closed are not opened for any purpose while in the area where they are stored and (c) adequate precautions are taken to ensure that rain water, which might become contaminated by the dangerous goods, is collected and disposed of safely. ▸ Ensure proper stock-control measures are maintained to prevent prolonged storage of dangerous goods. ▸ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container	For low viscosity materials and solids: Drums and jerricans must be of the non-removable head type. Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt. (23 deg. C): ▸ Removable head packaging and ▸ cans with friction closures may be used. - Where combination packages are used, there must be sufficient inert absorbent material to absorb completely any leakage that may occur, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic. All combination packages for Packing group I and II must contain cushioning material.
Storage incompatibility	Isopropanol (syn: isopropyl alcohol, IPA): ▸ forms ketones and unstable peroxides on contact with air or oxygen; the presence of ketones especially methyl ethyl ketone (MEK, 2-butanone) will accelerate the rate of peroxidation ▸ reacts violently with strong oxidisers, powdered aluminium (exothermic), crotonaldehyde, diethyl aluminium bromide (ignition), dioxygenyl tetrafluoroborate (ignition/ ambient temperature), chromium trioxide (ignition), potassium-tert-butoxide (ignition), nitroform (possible explosion), oleum (pressure increased in closed container), cobalt chloride, aluminium triisopropoxide, hydrogen plus palladium dust (ignition), oxygen gas, phosgene, phosgene plus iron salts (possible explosion), sodium dichromate plus sulfuric acid (exothermic/ incandescence), triisobutyl aluminium ▸ reacts with phosphorus trichloride forming hydrogen chloride gas ▸ reacts, possibly violently, with alkaline earth and alkali metals, strong acids, strong caustics, acid anhydrides, halogens,aliphatic amines, aluminium isopropoxide, isocyanates, acetaldehyde, barium perchlorate (forms highly explosive perchloric ester compound), benzoyl peroxide, chromic acid, dialkylzincs, dichlorine oxide, ethylene oxide (possible explosion), hexamethylene diisocyanate (possible explosion), hydrogen peroxide (forms explosive compound), hypochlorous acid, isopropyl chlorocarbonate, lithium aluminium hydride, lithium tetrahydroaluminate, nitric acid, nitrogen dioxide, nitrogen tetraoxide (possible explosion), pentafluoroguanidine, perchloric acid (especially hot), permonosulfuric acid, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium, trinitromethane ▸ attacks some plastics, rubber and coatings ▸ reacts with metallic aluminium at high temperature ▸ may generate electrostatic charges Alcohols ▸ are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents. ▸ reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen ▸ react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine, phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium ▸ should not be heated above 49 deg. C. when in contact with aluminium equipment

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Canada - Nova Scotia Occupational Exposure Limits	Talc	Soapstone	6 mg/m3	Not Available	Not Available	TLV Basis: lower respiratory tract irritation. Particulate matter containing no asbestos and < 1% crystalline silica.

Continued...

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Canada - Nova Scotia Occupational Exposure Limits	Talc	Talc - Containing asbestos fibers	Not Available	Not Available	2 mg/m3	Use asbestos TLV, not to exceed stated ceiling. TLV Basis/Critical Effect(s): asbestosis; cancer
Canada - Nova Scotia Occupational Exposure Limits	Talc	Soapstone	3 mg/m3	Not Available	Not Available	TLV Basis: lower respiratory tract irritation. Particulate matter containing no asbestos and < 1% crystalline silica.
Canada - Nova Scotia Occupational Exposure Limits	Talc	Talc - Containing no asbestos fibers	2 mg/m3	Not Available	Not Available	TLV Basis: lower respiratory tract irritation
Canada - Alberta Occupational Exposure Limits	Talc	Talc Respirable particulate containing no asbestos fibres	2 mg/m3	Not Available	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	Talc	Soapstone - Respirable	3 mg/m3	Not Available	Not Available	Not Available
Canada - Alberta Occupational Exposure Limits	Talc	Soapstone - Total (no asbestos and less than 1% crystalline silica)	6 mg/m3	Not Available	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	Talc	Talc, (respirable fraction++)	2 mg/m3	Not Available	Not Available	Not Available
Canada - Manitoba Occupational Exposure Limits	Talc	Not Available	2 mg/m3	Not Available	Not Available	TLV® Basis: Pulm fibrosis; pulm func
Canada - Manitoba Occupational Exposure Limits	Talc	Not Available	Not Available	Not Available	Not Available	TLV® Basis: Use Asbestos TLV®
Canada - British Columbia Occupational Exposure Limits	Talc	Talc - Containing asbestos fibres	0.1 f/cc	Not Available	Not Available	(K) - should not exceed 2 mg/m3 respirable particulate.
Canada - British Columbia Occupational Exposure Limits	Talc	Talc - Containing no asbestos fibres, Respirable	2 mg/m3	Not Available	Not Available	(E) - the value is for particulate matter containing no asbestos and less than 1% crystalline silica.
Canada - Prince Edward Island Occupational Exposure Limits	Talc	Talc - Containing asbestos fibers	Not Available	Not Available	Not Available	TLV® Basis: Use Asbestos TLV®
Canada - Prince Edward Island Occupational Exposure Limits	Talc	Talc - Containing no asbestos fibers	2 mg/m3	Not Available	Not Available	TLV® Basis: Pulm fibrosis; pulm func
Canada - Ontario Occupational Exposure Limits	Talc	Talc, containing no asbestos	2 f/cc	Not Available	Not Available	(K) Should not exceed 2 mg/m3 respirable particulate mass.
Canada - Ontario Occupational Exposure Limits	Talc	Talc, containing no asbestos (Respirable fraction)	2 mg/m3	Not Available	Not Available	(R) Respirable fraction: means that size fraction of the airborne particulate deposited in the gas-exchange region of the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size-selective sampling criteria for airborne particulate matter; and (b) has the cut point of 4 µm at 50 per cent collection efficiency. (E) The value is for particulate matter containing no asbestos and < 1 per cent crystalline silica.
Canada - Northwest Territories Occupational Exposure Limits	Talc	Talc, (respirable fraction)	2 mg/m3	Not Available	Not Available	Not Available

Continued...

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	Talc	Talc, non fibrous	3 mg/m3	Not Available	Not Available	Not Available
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	Talc	Talc, fibrous (note 4)	Not Available	Not Available	Not Available	Not Available
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	Kaolin	Kaolin	Not Available	Not Available	Not Available	(See Table 11)
Canada - Nova Scotia Occupational Exposure Limits	Kaolin	Kaolin	2 mg/m3	Not Available	Not Available	TLV Basis: pneumoconiosis. Value is for particulate matter containing no asbestos and <1% crystalline silica.
Canada - Alberta Occupational Exposure Limits	Kaolin	Kaolin respirable	2 mg/m3	Not Available	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	Kaolin	Kaolin (respirable fraction++)	2 mg/m3	4 mg/m3	Not Available	Not Available
Canada - Manitoba Occupational Exposure Limits	Kaolin	Not Available	2 mg/m3	Not Available	Not Available	TLV® Basis: Pneumoconiosis
Canada - British Columbia Occupational Exposure Limits	Kaolin	Kaolin, Respirable	2 mg/m3	Not Available	Not Available	(E) - the value is for particulate matter containing no asbestos and less than 1% crystalline silica.
Canada - Prince Edward Island Occupational Exposure Limits	Kaolin	Kaolin	2 mg/m3	Not Available	Not Available	TLV® Basis: Pneumoconiosis
Canada - Northwest Territories Occupational Exposure Limits	Kaolin	Kaolin (respirable fraction)	2 mg/m3	4 mg/m3	Not Available	Not Available
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	Kaolin	Kaolin	5 mg/m3	Not Available	Not Available	Not Available
Canada - Nova Scotia Occupational Exposure Limits	Titanium dioxide	Titanium dioxide	10 mg/m3	Not Available	Not Available	TLV Basis: lower respiratory tract irritation
Canada - Alberta Occupational Exposure Limits	Titanium dioxide	Titanium dioxide	10 mg/m3	Not Available	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	Titanium dioxide	Titanium dioxide	10 mg/m3	20 mg/m3	Not Available	Not Available
Canada - Manitoba Occupational Exposure Limits	Titanium dioxide	Not Available	10 mg/m3	Not Available	Not Available	TLV® Basis: LRT irr
Canada - British Columbia Occupational Exposure Limits	Titanium dioxide	Titanium dioxide	10 mg/m3	Not Available	Not Available	(N) - the 8-hour TWA listed in the Table is for the total dust. The substance also has an 8-hour TWA of 3 mg/m 3 for the respirable fraction.
Canada - Prince Edward Island Occupational Exposure Limits	Titanium dioxide	Titanium dioxide	10 mg/m3	Not Available	Not Available	TLV® Basis: LRT irr
Canada - Northwest Territories Occupational Exposure Limits	Titanium dioxide	Titanium dioxide	10 mg/m3	20 mg/m3	Not Available	Not Available
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	Titanium dioxide	Titanium dioxide	10 mg/m3	Not Available	Not Available	Not Available

Continued...

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	Calcium silicate	Fibres-Natural Mineral Fibres (note 4) Wollastonite	10 mg/m3	Not Available	Not Available	Not Available
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	Calcium silicate	Fibres-Natural Mineral Fibres (note 4) Wollastonite	5 mg/m3	Not Available	Not Available	Not Available
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	polytetrafluoroethylene	Polytetrafluoroethylene decomposition products	Not Available	Not Available	Not Available	Not Available
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	cellulose	Cellulose (paper fibre)	Not Available	Not Available	Not Available	(See Table 11)
Canada - Nova Scotia Occupational Exposure Limits	cellulose	Cellulose	10 mg/m3	Not Available	Not Available	TLV Basis: upper respiratory tract irritation
Canada - Alberta Occupational Exposure Limits	cellulose	Cellulose	10 mg/m3	Not Available	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	cellulose	Cellulose (paper fibre)	10 mg/m3	20 mg/m3	Not Available	Not Available
Canada - Manitoba Occupational Exposure Limits	cellulose	Not Available	10 mg/m3	Not Available	Not Available	TLV® Basis: URT irr
Canada - British Columbia Occupational Exposure Limits	cellulose	Cellulose	10 mg/m3	Not Available	Not Available	(N) - the 8-hour TWA listed in the Table is for the total dust. The substance also has an 8-hour TWA of 3 mg/m 3 for the respirable fraction.
Canada - Prince Edward Island Occupational Exposure Limits	cellulose	Cellulose	10 mg/m3	Not Available	Not Available	TLV® Basis: URT irr
Canada - Northwest Territories Occupational Exposure Limits	cellulose	Cellulose (paper fibre)	10 mg/m3	20 mg/m3	Not Available	Not Available
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	cellulose	Cellulose (paper fibres)	10 mg/m3	Not Available	Not Available	Not Available
Canada - Nova Scotia Occupational Exposure Limits	silica crystalline - quartz	Silica, Crystalline - Quartz	0.025 mg/m3	Not Available	Not Available	TLV Basis: pulmonary fibrosis; lung cancer
Canada - Alberta Occupational Exposure Limits	silica crystalline - quartz	Silica-Crystalline, Respirable particulate - Quartz	0.025 mg/m3	Not Available	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	silica crystalline - quartz	Silica - Crystalline# : Quartz (respirable fraction++)	0.05 mg/m3	Not Available	Not Available	T20
Canada - Manitoba Occupational Exposure Limits	silica crystalline - quartz	Not Available	0.025 mg/m3	Not Available	Not Available	TLV® Basis: Pulm fibrosis; lung cancer
Canada - Prince Edward Island Occupational Exposure Limits	silica crystalline - quartz	Silica, crystalline - α-quartz and cristobalite	0.025 mg/m3	Not Available	Not Available	TLV® Basis: Pulm fibrosis; lung cancer
Canada - Ontario Occupational Exposure Limits	silica crystalline - quartz	Silica, Crystalline - Quartz/Tripoli (Respirable fraction)	0.10 mg/m3	Not Available	Not Available	* Denotes a chemical agent listed in Table 1 of Ontario Regulation 490/09 (Designated Substances) made under the Act. See clause 2 (2) (a) of this Regulation. (R) Respirable fraction: means that size fraction of the airborne particulate deposited in the gas-exchange region of the

Continued...

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
						respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the ACGIH particle size-selective sampling criteria for airborne particulate matter; and (b) has the cut point of 4 µm at 50 per cent collection efficiency.
Canada - Northwest Territories Occupational Exposure Limits	silica crystalline - quartz	Silica - Crystalline#: Quartz (respirable fraction)	0.05 mg/m3	Not Available	Not Available	Schedule R
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	silica crystalline - quartz	Silica - Crystalline, Quartz	0.1 mg/m3	Not Available	Not Available	Not Available
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	isopropanol	Isopropyl alcohol - Skin	400 ppm / 980 mg/m3	1,225 mg/m3 / 500 ppm	Not Available	Not Available
Canada - Nova Scotia Occupational Exposure Limits	isopropanol	2-Propanol	200 ppm	400 ppm	Not Available	TLV Basis: eye & upper respiratory tract irritation; central nervous system impairment
Canada - Alberta Occupational Exposure Limits	isopropanol	2-Propanol (Isopropyl alcohol, isopropanol)	200 ppm / 492 mg/m3	984 mg/m3 / 400 ppm	Not Available	Not Available
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	isopropanol	Isopropyl alcohol	200 ppm	400 ppm	Not Available	Not Available
Canada - Manitoba Occupational Exposure Limits	isopropanol	Not Available	200 ppm	400 ppm	Not Available	TLV® Basis: Eye & URT irr; CNS impair; BEI
Canada - British Columbia Occupational Exposure Limits	isopropanol	Isopropanol (Isopropyl alcohol)	200 ppm	400 ppm	Not Available	Not Available
Canada - Prince Edward Island Occupational Exposure Limits	isopropanol	2-Propanol	200 ppm	400 ppm	Not Available	TLV® Basis: Eye & URT irr; CNS impair; BEI
Canada - Northwest Territories Occupational Exposure Limits	isopropanol	Isopropyl alcohol	200 ppm	400 ppm	Not Available	Not Available
Canada - Quebec Permissible Exposure Values for Airborne Contaminants	isopropanol	Isopropyl alcohol	400 ppm / 985 mg/m3	1230 mg/m3 / 500 ppm	Not Available	Not Available

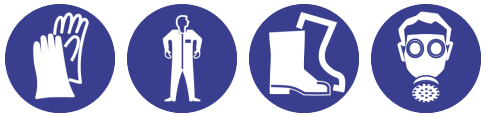
Exposure controls

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.
Employers may need to use multiple types of controls to prevent employee overexposure.

- Employees exposed to confirmed human carcinogens should be authorized to do so by the employer, and work in a regulated area.
- Work should be undertaken in an isolated system such as a 'glove-box' . Employees should wash their hands and arms upon completion of the assigned task and before engaging in other activities not associated with the isolated system.
- Within regulated areas, the carcinogen should be stored in sealed containers, or enclosed in a closed system, including piping systems, with any sample ports or openings closed while the carcinogens are contained within.
- Open-vessel systems are prohibited.
- Each operation should be provided with continuous local exhaust ventilation so that air movement is always from ordinary work areas to the operation.
- Exhaust air should not be discharged to regulated areas, non-regulated areas or the external environment unless

Continued...

	decontaminated. Clean make-up air should be introduced in sufficient volume to maintain correct operation of the local exhaust system. ▸ For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. ▸ Except for outdoor systems, regulated areas should be maintained under negative pressure (with respect to non-regulated areas). ▸ Local exhaust ventilation requires make-up air be supplied in equal volumes to replaced air. ▸ Laboratory hoods must be designed and maintained so as to draw air inward at an average linear face velocity of 0.76 m/sec with a minimum of 0.64 m/sec. Design and construction of the fume hood requires that insertion of any portion of the employees body, other than hands and arms, be disallowed. For large scale or continuous use: ▸ Spark-free, earthed ventilation system, venting directly to the outside and separate from usual ventilation systems ▸ Provide dust collectors with explosion vents
Personal protection	
Eye and face protection	▸ Safety glasses with side shields. ▸ Chemical goggles. ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]
Skin protection	See Hand protection below
Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: · frequency and duration of contact, · chemical resistance of glove material, · glove thickness and · dexterity Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent). · When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use. · Contaminated gloves should be replaced. As defined in ASTM F-739-96 in any application, gloves are rated as: · Excellent when breakthrough time > 480 min · Good when breakthrough time > 20 min · Fair when breakthrough time < 20 min · Poor when glove material degrades For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: · Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. · Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Continued...

	‣ Wear physical protective gloves, e.g. leather. ‣ Wear safety footwear.
Body protection	See Other protection below
Other protection	‣ Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent] ‣ Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted. [AS/NZS 1715 or national equivalent] ‣ Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely. ‣ Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood. ‣ Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and hood. ‣ Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity. ‣ For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets). ‣ Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

- **Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.**
- **The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).**
- **Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.**
- **Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.**
- **Use approved positive flow mask if significant quantities of dust becomes airborne.**
- **Try to avoid creating dust conditions.**

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	White paste (solid)

Physical state	Solid	**Relative density (Water = 1)**	1.14
Odour	Slight alcohol odor	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Available	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	25	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available

Continued...

Flammability	Flammable.	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Applicable
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	17.29
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Partly miscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	246

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	‣ Unstable in the presence of incompatible materials. ‣ Product is considered stable. ‣ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract. Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	Overexposure to non-ring alcohols causes nervous system symptoms. These include headache, muscle weakness and inco-ordination, giddiness, confusion, delirium and coma. The material has **NOT**been classified as 'harmful by ingestion'. This is because of the lack of corroborating animal or human evidence.
Skin Contact	Causes skin irritation.
Eye	This material can cause eye irritation and damage in some persons.
Chronic	There is ample evidence that this material can be regarded as being able to cause cancer in humans based on experiments and other information. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects.

Masters Pro-Dope	**TOXICITY**	**IRRITATION**
	Not Available	Not Available

Acute Toxicity	✗	**Carcinogenicity**	✓
Skin Irritation/Corrosion	✓	**Reproductivity**	✗
Serious Eye Damage/Irritation	✓	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✗	**STOT - Repeated Exposure**	✓
Mutagenicity	✗	**Aspiration Hazard**	✗

SECTION 12 Ecological information

Toxicity

Continued...

Masters Pro-Dope	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available

DO NOTdischarge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Titanium dioxide	HIGH	HIGH
polytetrafluoroethylene	HIGH	HIGH
cellulose	LOW	LOW
propylene glycol monobutyl ether - alpha isomer	LOW	LOW
isopropanol	LOW (Half-life = 14 days)	LOW (Half-life = 3 days)

Bioaccumulative potential

Ingredient	Bioaccumulation
Titanium dioxide	LOW (BCF = 10)
polytetrafluoroethylene	LOW (LogKOW = 1.2142)
cellulose	LOW (LogKOW = -5.1249)
propylene glycol monobutyl ether - alpha isomer	LOW (LogKOW = 0.9842)
isopropanol	LOW (LogKOW = 0.05)

Mobility in soil

Ingredient	Mobility
Titanium dioxide	LOW (KOC = 23.74)
polytetrafluoroethylene	LOW (KOC = 106.8)
cellulose	LOW (KOC = 10)
propylene glycol monobutyl ether - alpha isomer	HIGH (KOC = 1.289)
isopropanol	HIGH (KOC = 1.06)

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Otherwise: ▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ▸ Where possible retain label warnings and SDS and observe all notices pertaining to the product. ▸ Recycle wherever possible. ▸ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. ▸ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material) ▸ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 Transport information

Labels Required

Continued...

Marine Pollutant	NO

Land transport (TDG)

UN number	3175
UN proper shipping name	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. Isopropanol
Transport hazard class(es)	Class: 4.1 Subrisk: Not Applicable
Packing group	II
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: 16, 56 Explosive Limit and Limited Quantity Index: 1 kg ERAP Index: Not Applicable

Air transport (ICAO-IATA / DGR)

UN number	3175
UN proper shipping name	Solids containing flammable liquid, n.o.s. * Isopropanol
Transport hazard class(es)	ICAO/IATA Class: 4.1 ICAO / IATA Subrisk: Not Applicable ERG Code: 3L
Packing group	II
Environmental hazard	Not Applicable
Special precautions for user	Special provisions: A46 Cargo Only Packing Instructions: 448 Cargo Only Maximum Qty / Pack: 50 kg Passenger and Cargo Packing Instructions: 445 Passenger and Cargo Maximum Qty / Pack: 15 kg Passenger and Cargo Limited Quantity Packing Instructions: Y441 Passenger and Cargo Limited Maximum Qty / Pack: 5 kg

Sea transport (IMDG-Code / GGVSee)

UN number	3175
UN proper shipping name	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. Isopropanol
Transport hazard class(es)	IMDG Class: 4.1 IMDG Subrisk: Not Applicable
Packing group	II
Environmental hazard	Not Applicable
Special precautions for user	EMS Number: F-A , S-I Special provisions: 216 274 Limited Quantities: 1 kg

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

Continued...

Talc is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)
Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B : Possibly carcinogenic to humans

Kaolin is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)
Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
Chemical Footprint Project - Chemicals of High Concern List
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

Oxidized Castor Oil is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)

Titanium dioxide is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)
Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 2B : Possibly carcinogenic to humans
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

Calcium silicate is found on the following regulatory lists

Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

polytetrafluoroethylene is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)
Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

silica amorphous, fumed is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)

cellulose is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)
Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

silica crystalline - quartz is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)
Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1 : Carcinogenic to humans

propylene glycol monobutyl ether - alpha isomer is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)
Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS

isopropanol is found on the following regulatory lists

Canada Categorization decisions for all DSL substances
Canada Domestic Substances List (DSL)
Canada Toxicological Index Service - Workplace Hazardous Materials Information System - WHMIS GHS
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

National Inventory Status

National Inventory	Status
Canada - DSL	No (Calcium silicate)

Continued...

National Inventory	Status
Canada - NDSL	No (Talc; Kaolin; Oxidized Castor Oil; Titanium dioxide; Calcium silicate; polytetrafluoroethylene; silica amorphous, fumed; cellulose; silica crystalline - quartz; propylene glycol monobutyl ether - alpha isomer; isopropanol)

SECTION 16 Other information

Revision Date	12/16/2020
Initial Date	11/20/2020

Other information

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

SAFETY DATA SHEET

1. Identification

Product identifier **Megatape Thread Sealing Tape**

Other means of identification

Synonyms Thread Seal Tape, Pink Thread Seal Tape, Yellow TFE Tape

Part Numbers: 15050D, 15100, 15110,15120

Recommended use Article

Recommended restrictions None known.

	Manufacturer	**Distributor**
Company Name	Oatey Co.	Oatey Canada Supply Chain Services Co.
Address	4700 West 160th St. Cleveland, OH 44135	145 Walker Drive Brampton, ON L6T 5P5, Canada

Telephone 216-267-7100

E-mail info@oatey.com

Transport Emergency Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)

Emergency First Aid 1-877-740-5015

Contact person MSDS Coordinator

2. Hazard(s) identification

Classified hazards

Exempt (manufactured article).

Label elements

Exempt (manufactured article).

Exempt (manufactured article).

3. Composition/information on ingredients

Mixtures

The components are not hazardous or are below required disclosure limits.

4. First-aid measures

Inhalation Not likely, due to the form of the product.

Skin contact Not likely, due to the form of the product.

Eye contact Not likely, due to the form of the product.

Ingestion Not likely, due to the form of the product.

Most important symptoms/effects, acute and delayed Inhalation of fumes resulting from thermal degradation (over 315ºC/ 600°F) may cause "fume fever" which has symptoms similar to metal fume fever or influenza (chills, fever, tightness of the chest).

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Sweep up an collect as harmless organic matter.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection	If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.
Skin protection	
Hand protection	Not normally needed.
Other	Not normally needed.
Respiratory protection	No personal respiratory protective equipment normally required.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Use good industrial hygiene practices in handling this material.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid. Tape.
Color	White Yellow or Pink.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	620 °F (326.67 °C)
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.

Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.1
Solubility(ies)	
Solubility (water)	Not soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Temperatures above 315 °C. Resin with slowly thermally degrade into a serious of unstable, short-lived fluorocarbons and hydrofluoric acid. Contact with incompatible materials.
Incompatible materials	Sodium potassium alloy
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not available.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	No special precautions are needed for disposal of product.
Local disposal regulations	No special precautions are needed for disposal of product.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Not applicable.
Contaminated packaging	No special precautions.

14. Transport information

TDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

Canadian regulations Exempt (manufactured article).

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

16. Other Information

Issue date	17-March-2016
Revision date	-
Version #	01

Disclaimer

Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

SDS - SAFETY DATA SHEET

SECTION I: IDENTIFICATION

Product name: MASTERS® METALLIC COMPOUND™
Product use: Pipe thread and gasket sealant.

Supplier name and address:
G.F. THOMPSON CO. LTD.
620 Steven Court, Unit 11
Newmarket, Ontario
L3Y 6Z2

Manufacturer name and address:
Refer to supplier.

Emergency Tel:
Mon – Fri, 7:30 am to 5:00 pm EST
905-898-2557
800-499-3673 (toll free)
24 hr Emergency Tel:
905-252-6219 or 647-448-2050

SECTION II: HAZARDS IDENTIFICATION

Classification of the chemical

Medium, grey paste. Alcohol odour.

Most important hazards:
Combustible liquid. May be ignited by open flame.
Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.
Very toxic to aquatic life with long lasting effects. Avoid release to the environment. See Section 12 for more environmental information.

This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).
Classification:
- Flammable liquid – Category 4
- Germ cell mutagenicity - Category 2
- Carcinogenicity - Category 1B
- Reproductive toxicity - Category 1A
- Specific target organ toxicity, repeated exposure - Category 1

Label elements

Hazard pictogram(s)

Signal Word

DANGER!

Hazard statement(s)

Combustible liquid.
Suspected of causing genetic defects.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking.
Do not breathe dust, fume or vapor.
Wash exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/clothing and eye/face protection.

IF exposed or concerned: Get medical advice/attention.
In case of fire: Use carbon dioxide, dry chemical or foam to extinguish.

Store in a well-ventilated place.
Store locked up.

Dispose of contents/container in accordance with local regulation.

Other hazards

Other hazards which do not result in classification:
Toxic fumes, gases or vapours may evolve on burning. May be mildly irritating to skin, eyes and respiratory system. Inhalation of fumes may result in metal fume fever, a flu-like illness. May cause gastrointestinal irritation.

Environmental precautions:
Very toxic to aquatic life with long lasting effects. Avoid release to the environment. See Section 12 for more environmental information.

SECTION III: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Common name and synonyms	CAS #	Concentration (% by weight)
Lead	Lead, elemental	7439-92-1	**80.67**
n-Butyl alcohol	n-Butanol 1-Hydroxybutane	71-36-3	**1.19**

SECTION IV: FIRST-AID MEASURES

Description of first aid measures

Ingestion : Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

Inhalation : If inhaled, move to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing is irregular or stopped, administer artificial respiration. IF exposed or concerned: Get medical advice/attention.

Skin contact : For skin contact, wash with soap and water while removing contaminated clothing. IF exposed or concerned: Get medical advice/attention. Launder contaminated clothing before reuse, or discard.

Eye contact : Rinse immediately with plenty of water, also under the eyelids. IF exposed or concerned: Get medical advice/attention.

Most important symptoms and effects, both acute and delayed

: Suspected of causing genetic defects.
May cause cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.
May damage fertility or the unborn child. Effects of excessive exposures may include: Deformity; Delayed development; Functional disorders in fetus; Sterility; Reduced fertility; Menstruation disorders.
Causes damage to organs through prolonged or repeated exposure. Lead accumulates in body tissues and prolonged overexposure to even low levels may eventually result in lead toxicity syndrome which may result in permanent damage or death. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness. Lead may damage kidney function, the blood forming system and the reproductive system.
May be mildly irritating to skin, eyes and respiratory system. May cause coughing and breathing difficulties. Exposure may cause temporary irritation, redness or discomfort.
Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

: Provide general supportive measures and treat symptomatically.

SECTION V: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Use water fog or fine spray, foams, carbon dioxide or dry chemical.

Unsuitable extinguishing media

: Do not use water jet, as this may spread burning material.

Special hazards arising from the substance or mixture / Conditions of flammability

: Combustible liquid. May be ignited by open flame. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Toxic fumes, gases or vapours may evolve on burning.

Hazardous combustion products

: Metal oxides; Carbon oxides; Aldehydes; Acids; unburned alcohols; Other unidentified organic compounds.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special fire-fighting procedures

: Move containers from fire area if safe to do so. Use water spray to cool unopened containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION VI: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: All persons dealing with the clean-up should wear the appropriate personal protective equipment. Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Prevent product from entering drains, sewers, waterways and soil. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

: Ventilate the area. Prevent further leakage or spillage if safe to do so. Eliminate all ignition sources. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Pick up and transfer to properly labeled containers. Do not use combustible absorbents, such as sawdust. Contaminated absorbent material may pose the same hazards as the spilled product. Refer to Section 13 for disposal of contaminated material. Contact the proper local authorities.

SECTION VII: HANDLING AND STORAGE

Precautions for safe handling

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Use with adequate ventilation. Wear suitable protective equipment during handling. Wear protective gloves/clothing and eye/face protection. Do not breathe dust, fume or vapor. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Avoid contact with incompatible materials. Wash thoroughly after handling. Keep container tightly closed when not in use. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Conditions for safe storage : Store in a cool, well-ventilated area. Inspect periodically for damage or leaks. Store away from incompatible materials. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Store locked up.

Incompatible materials : Strong oxidizing agents; Strong acids; Strong bases

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Lead	0.05 mg/m³	N/Av	50 µg/m3 (as Pb) (final rule limit)	N/Av
n-Butyl alcohol	20 ppm	N/Av	100 ppm (300 mg/m³)	N/Av

Exposure controls

Ventilation and engineering measures

: Use with adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection : If airbourne concentrations are above the permissible exposure limit or are not known, use NIOSH-approved respirators. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with CSA Z94.4-02. Advice should be sought from respiratory protection specialists.

Skin protection : Wear protective gloves/clothing. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear resistant clothing and boots.

Eye / face protection : Wear eye/face protection. Wear as appropriate: Safety glasses with side shields; Tightly fitting safety goggles. A full face shield may also be necessary.

Other protective equipment : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Do not breathe dust, fume or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash hands and face before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Medium, grey paste.
Odour : Alcohol odour.
Odour threshold : N/Av
pH : N/Av
Melting/Freezing point : 65.6 - 187.8°C (150 - 370°F) (emulsion range)

Initial boiling point and boiling range

: > 117.7°C (244°F) (based on ingredients)

Flash point : 63°C (145.4°F)
Flashpoint (Method) : closed cup
Evaporation rate (BuAe = 1) : N/Av
Flammability (solid, gas) : Not applicable.
Lower flammable limit (% by vol.)

: N/Av

Upper flammable limit (% by vol.)

: N/Av

Oxidizing properties : None known.
Explosive properties : Not explosive
Vapour pressure : N/Av
Vapour density : N/Av
Relative density / Specific gravity

: N/Av

Solubility in water : Insoluble.
Other solubility(ies) : N/Av
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution

: N/Av

Auto-ignition temperature : N/Av
Decomposition temperature : N/Av
Viscosity : N/Av
Volatiles (% by weight) : 1.6%
Volatile organic Compounds (VOC's)

: 54.4 g/L

Absolute pressure of container

: N/Ap

Flame projection length : N/Ap
Other physical/chemical comments

: No additional information.

SECTION X: STABILITY AND REACTIVITY

Reactivity : Not normally reactive.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions

: Hazardous polymerization does not occur.

Conditions to avoid : Do not use in areas without adequate ventilation. Avoid contact with incompatible materials. Avoid heat and open flame.
Incompatible materials : Strong oxidizing agents; Strong acids; Strong bases
Hazardous decomposition products

: None known, refer to hazardous combustion products in section 5.

SECTION XI: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES
Routes of entry skin & eye : YES
Routes of entry Ingestion : YES
Routes of exposure skin absorption

: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

: Mild respiratory irritant. May cause coughing and breathing difficulties. Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath.
Contains lead. Inhalation of lead fumes, mists or vapours may cause cumulative effects, which develop slowly over time and resemble chronic overexposure. Symptoms of overexposure to lead may include nausea, headache, fatigue, cramps, vomiting, diarrhea, constipation, confusion, convulsions, anemia and muscular weakness.

Sign and symptoms ingestion

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may cause symptoms similar to inhalation.

Sign and symptoms skin : Direct skin contact may result in little or no irritation. Direct skin contact may cause temporary redness. Can be absorbed through open wounds or cuts, causing lead poisoning (effects similar to those listed for Inhalation).

Sign and symptoms eyes : Direct eye contact may cause slight or mild, transient irritation. Direct eye contact may cause temporary redness.

Potential Chronic Health Effects

: Pneumoconiosis, or “dusty lung” disease, may result from chronic exposure to any dust. Repeated or prolonged inhalation of fine dusts may cause an increase in mucous production.
This product contains a lead and/or lead compounds. Overexposure to lead dust and fumes adversely affects blood and blood forming tissues, kidneys, liver and the central/peripheral nervous systems and male/female reproductive organs.

Mutagenicity : This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Germ cell mutagenicity - Category 2. Suspected of causing genetic defects.
Contains: lead compounds.
Lead is known to cause mutations in both non-reproductive (somatic) cells and reproductive (germ) cells.

Carcinogenicity : This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Carcinogenicity - Category 1A. May cause cancer. Symptoms may include persistent coughing, shortness of breath, coughing up blood and wheezing.
Contains: lead compounds.
Lead is classified as possibly carcinogenic by IARC (Group 2A), the ACGIH (Category A3), the NTP (reasonably anticipated) and OSHA.

Reproductive effects & Teratogenicity

: This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Reproductive toxicant: Category 1A. May damage fertility or the unborn child. Effects of excessive exposures may include: Deformity; Delayed development; Functional disorders in fetus; Sterility; Reduced fertility; Menstruation disorders.
Contains: lead compounds.
Lead compounds are known to cause certain reproductive effects in both males and females. Lead compounds are known to cause embryotoxicity.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : This material is classified as hazardous under Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Classification:
Specific target organ toxicity, repeated exposure - Category 1. Causes damage to organs through prolonged or repeated exposure.
Contains: lead and lead compounds.
Lead accumulates in body tissues and prolonged overexposure to even low levels may eventually result in lead toxicity syndrome which may result in permanent damage or death. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite, indigestion, nausea, vomiting, constipation, abdominal cramps, disturbance of rest and sleep, and weakness. Lead may damage kidney function, the blood forming system and the reproductive system.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye, respiratory and central nervous system disorders.

Synergistic materials : None known or reported by the manufacturer.

Toxicological data : No data is available on the product itself. The calculated ATE values for this mixture are:
ATE oral = 66,387 mg/kg
ATE dermal = 285,882 mg/kg
ATE inhalation (vapours) = 2042 mg/L/4H

See below for individual ingredient acute toxicity data.

Chemical name	LC_{50}(4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Lead	> 5.05 mg/L (dust) (No mortality) (Read-across)	> 2000 mg/kg (No mortality) (Read-across)	> 2000 mg/kg (No mortality) (Read-across)
n-Butyl alcohol	8000 ppm (24.3 mg/L) (vapour)	790 - 4360 mg/kg	3402 mg/kg

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION XII: ECOLOGICAL INFORMATION

Refer to the supplier for Ecological Information

SECTION XII: DISPOSAL CONSIDERATIONS

Refer to the supplier for Disposal Considerations

SECTION XIV: TRANSPORTATION INFORMATION

Refer to the supplier for Transportation Information

SECTION XV: REGULATORY INFORMATION

Refer to the supplier for Regulatory Informations

SECTION XV1: OTHER INFORMATION

Prepared by: G. F. Thompson Co. Ltd
Telephone No.: 905-898-2557
Preparation date: **May 30, 2017**

ABS 55Y (Standard Grade -Yellow)

SECTION 1. IDENTIFICATION

Product Identifier	ABS 55Y (Standard Grade -Yellow)
Other Means of Identification	10044, 10055, 10242, 10263, 10284, 10305, 10086, 10107
Recommended Use	Solvent Cement. For Welding ABS plastic pipes and fittings.
Restrictions on Use	None known.
Manufacturer	Sluyter Company Ltd., 375 Steelcase Road East, Markham, ON, L3R 1G3, Canada, Technical Department, (905) 475-6011, www.sluyter.com
Emergency Phone No.	CANUTEC, 1-888-226-8832 , or *666 on a cellular phone.
SDS No.	0100
Date of Preparation	March 15, 2018

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015).

Classification

Flammable liquid - Category 2; Acute toxicity (Oral) - Category 3; Acute toxicity (Dermal) - Category 3; Acute toxicity (Inhalation) - Category 3; Skin irritation - Category 2; Serious eye damage - Category 1; Eye irritation - Category 2

Label Elements

Danger
Hazard Statement(s):
Causes serious eye damage.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Precautionary Statement(s):
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical, ventilating, and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing vapours.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/eye protection/face protection.
Response:
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTRE or doctor if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.
Immediately call a POISON CENTRE or doctor.
In case of fire: Use water spray or fog, carbon dioxide, dry chemical powder to extinguish.
Storage:
Store in a well-ventilated place. Keep cool.
Disposal:
Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

Health Hazards Not Otherwise Classified (HHNOC): May be a fire hazard in a confined space. May be a health hazard in confined spaces.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Toluene	108-88-3	60 - 80	Toluol	
Methyl Ethyl Ketone	78-93-3	15 - 40	MEK	
Acrylonitrile-butadiene-styrene copolymers	9003-56-9	10 - 30	ABS	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Get medical advice or attention if you feel unwell or are concerned.

Skin Contact

Wash with plenty of water. Take off immediately contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Get medical advice or attention if you feel unwell or are concerned.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

Immediately call a Poison Centre or doctor. Do not induce vomiting. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting.

First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: small amounts can cause effects as described for inhalation. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. If on skin: can cause effects as described for skin contact. If in eyes: small amounts may cause very mild irritation. May cause moderate to severe irritation. Symptoms include sore, red eyes, and tearing. If inhaled and/or swallowed: small amounts symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. Symptoms may include coughing, choking, shortness of breath, difficult or rapid breathing and wheezing.

Immediate Medical Attention and Special Treatment

Target Organs

Eyes, lungs, respiratory system.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

Water is not effective for extinguishing a fire. It may not cool product below its flash point.

Specific Hazards Arising from the Product

Flammable liquid and vapour. Can ignite at room temperature. Releases vapour that can form explosive mixture with air. May travel a considerable distance to a source of ignition and flash back to a leak or open container.
In a fire, the following hazardous materials may be generated: corrosive, flammable ammonia; very toxic carbon monoxide, carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Fight fire from a safe distance or a protected location. flammable or explosive atmosphere. Dike and recover contaminated water for appropriate disposal.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel.

Environmental Precautions

It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Do NOT use combustible materials such as sawdust. Dike spilled product to prevent runoff. Dike and recover contaminated water for appropriate disposal. Store recovered product in suitable containers that are: review Section 13 (Disposal Considerations) of this safety data sheet. Review Section 13 (Disposal Considerations) of this safety data sheet.

Other Information

Contact supplier, local fire and emergency services for help. Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

If used in a confined space: prevent skin contact. Do not get in eyes, on skin or on clothing. Only use where there is adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Conditions for Safe Storage

Store in an area that is: cool, well-ventilated, out of direct sunlight and away from heat and ignition sources. Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
Toluene		150 ppm	200 ppm			
Methyl Ethyl Ketone		200 ppm	885 mg/m3			

Appropriate Engineering Controls

Concentrated product: in a confined space: do not allow product to accumulate in the air in work or storage areas, or in

confined spaces. Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Exhaust directly to the outside, taking any necessary precautions for environmental protection. Provide eyewash in work area, if contact or splash hazard exists. Provide safety shower in work area, if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles.

Skin Protection

Concentrated product: wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Concentrated product: wear a NIOSH approved particulate respirator equipped with an N95, R95, or P95 filter.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Yellow liquid.
Odour	Aromatic
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	< 0 ºC (32 ºF) (melting); Not available (freezing)
Initial Boiling Point/Range	110 ºC (230 ºF)
Flash Point	-4 ºC (25 ºF) (closed cup)
Evaporation Rate	1.8 (n-butyl acetate = 1)
Flammability (solid, gas)	Flammable solid.
Upper/Lower Flammability or Explosive Limit	11.5% (upper); 1.8% (lower)
Vapour Pressure	22 mm Hg at 20 ºC
Vapour Density (air = 1)	> 1
Relative Density (water = 1)	0.86 - 0.90
Solubility	Practically insoluble in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	480 ºC (896 ºF)
Decomposition Temperature	Not available
Viscosity	Not available (dynamic)

Other Information

Physical State	Liquid

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources. Accumulation of static charge. Freezing.

Incompatible Materials

Oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide).

Hazardous Decomposition Products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information presented below is for the entire product, unless otherwise specified.

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Toluene	7585 ppm (rat) (vapour)	5580 mg/kg (rat)	12125 mg/kg (rabbit)
Methyl Ethyl Ketone	11700 ppm (male rat) (4-hour exposure) (vapour)	2740 mg/kg (rat)	6480 mg/kg (rabbit)

LC50: Not applicable.

LD50 (oral): Not applicable.

LD50 (dermal): Not applicable.

Skin Corrosion/Irritation

Human experience shows mild irritation. Symptoms include slight redness and swelling.

Serious Eye Damage/Irritation

Human experience shows serious eye irritation. May cause serious eye irritation based on information for closely related materials. Symptoms include sore, red eyes, and tearing. The vapour also irritates the eyes.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Skin Absorption

Symptoms may include redness, rash, swelling and itching.

Ingestion

Can cause effects as described for inhalation.

Aspiration Hazard

May be drawn into the lungs (aspirated) if swallowed or vomited. Symptoms may include coughing, choking, shortness of breath, difficult or rapid breathing, and wheezing.

Carcinogenicity

Not a carcinogen.

Key to Abbreviations

Group 3 = Not classifiable as to its carcinogenicity to humans.

Reproductive Toxicity

Development of Offspring

May harm the unborn child.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility. If inhaled: if inhaled and/or swallowed.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

Not mutagenic.

No information was located for: Skin Corrosion/Irritation, Serious Eye Damage/Irritation, STOT (Specific Target Organ Toxicity) - Repeated Exposure, Respiratory and/or Skin Sensitization, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

VOC INFORMATION This product emits VOC's (volatile organic compounds in use. Always ensure that the use of this product complies with local VOC Emission Regulations, where they exist. The VOC level is 580 grams/litre (SCAQMD Test Method 316A).

Ecotoxicity

No information was located.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Toluene	7.63 mg/L (Oncorhynchus mykiss (rainbow trout); 96-hour)	N/Av	N/Av	N/Av
Methyl Ethyl Ketone	2993 mg/L (Pimephales promelas (fathead minnow); 96-hour)	N/Av	N/Av	N/Av

Chronic Aquatic Toxicity

Chemical Name	NOEC Fish	EC50 Fish	NOEC Crustacea	EC50 Crustacea
Toluene	5.44 mg/L (Pimephales promelas (fathead minnow); 21-day)	N/Av	N/Av	N/Av
Methyl Ethyl Ketone	308 mg/L (21-day)	N/Av	N/Av	N/Av

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

This product contains volatile organic compounds.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations. Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction. This product and its container must be disposed of as hazardous waste. Do NOT dump into any sewers, on the ground or into any body of water. Do not reuse empty containers. Dispose of or recycle empty containers through an approved waste management facility.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	1133	Adhesives	Consumer Commodity	II
Canadian TDG	1133	Adhesives	3	II

Environmental Hazards	Not applicable
Special Precautions	Please note: Read safety instructions, SDS and emergency procedures before handling.

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Other Information	In containers up to 5 litres or 30 kg gross weight per package - this is shipped as CONSUMER COMMODITY. If the shipment exceeds 500 kg in weight, this is shipped as CONSUMER COMMODITY - ADHESIVES CLASS 3.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

This section is not required by WHMIS.

Canada

WHMIS 1988 Classification

B2 - Flammable Liquid

CEPA - National Pollutant Release Inventory (NPRI)

(Toluene)

SECTION 16. OTHER INFORMATION

NFPA Rating	**Health - 2 Flammability - 3 Instability - 2**
SDS Prepared By	Sluyter Company Ltd
Phone No.	905-475-6011
Date of Preparation	March 15, 2018
Revision Indicators	Date of Preparation.
Disclaimer	This Safety Data Sheet was prepared by Sluyter Company Ltd. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. Sluyter Company Ltd. expressly disclaims all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process. This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of Sluyter Company Ltd.