

SAFETY DATA SHEET**5o 2K URETHANE**

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

1. Identification**Product identifier**

Product name 5o 2K URETHANE

Product number 59845

Recommended use of the chemical and restrictions on use

Application Paints and Coatings

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Manufacturer C.E. Bradley
56 Bennett Drive
Brattleboro, VT 05301
+1 (802) 257-7971
info@cebradley.com

Emergency telephone number

Emergency telephone CHEMTEL Contract MIS00015: (800) 255-3924

2. Hazard(s) identification**Classification of the substance or mixture**

Physical hazards Flam. Liq. 3 - H226

Health hazards Skin Sens. 1 - H317 Repr. 1B - H360D STOT SE 3 - H336

Environmental hazards Not Classified

Label elements**Hazard symbols****Signal word**

Danger

Hazard statements

H226 Flammable liquid and vapor.
H317 May cause an allergic skin reaction.
H360D May damage the unborn child.
H336 May cause drowsiness or dizziness.

5o 2K URETHANE**Precautionary statements**

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 and hot surfaces. No smoking.
 P240 Ground/ bond container and receiving equipment.
 P241 Use explosion-proof electrical equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P261 Avoid breathing vapor/ spray.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P302+P352 If on skin: Wash with plenty of water.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
 P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 P308+P313 If exposed or concerned: Get medical advice/ attention.
 P312 Call a poison center/ doctor if you feel unwell.
 P321 Specific treatment (see medical advice on this label).
 P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains

n-butyl acetate, toluene, 2-methoxypropyl acetate, n-butyl methacrylate, 2-hydroxyethyl acrylate

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/Information on Ingredients**Mixtures**

n-butyl acetate CAS number: 123-86-4	30-60%
amorphous silicon dioxide, chemically prepared CAS number: 7631-86-9	1-5%
toluene CAS number: 108-88-3	<1%
2-methoxypropyl acetate CAS number: 70657-70-4	<1%
xylene CAS number: 1330-20-7	<1%

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n-butyl methacrylate CAS number: 97-88-1	<1%
2-hydroxyethyl acrylate CAS number: 818-61-1	<1%
ethylbenzene CAS number: 100-41-4	<1%

Composition comments * The exact components and/or percentage are withheld as a trade secret in accordance with 29 CFR 1910.1200.

4. First-aid measures**Description of first aid measures**

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention. Place unconscious person on their side in the recovery position and ensure breathing can take place.
Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. Place unconscious person on their side in the recovery position and ensure breathing can take place. Keep affected person under observation. Get medical attention.
Skin Contact	Rinse with water.
Eye contact	Rinse with water. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.
Ingestion	No specific symptoms known.
Skin contact	No specific symptoms known.
Eye contact	No specific symptoms known. May be slightly irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

5. Fire-fighting measures**Extinguishing media**

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Suitable extinguishing media The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards Containers can burst violently or explode when heated, due to excessive pressure build-up. Flammable liquid and vapour. Vapors may be ignited by a spark, a hot surface or an ember. Vapors may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapors. Evacuate area. Keep upwind to avoid inhalation of gases, vapors, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapors and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of dust and vapors. Use suitable respiratory protection if ventilation is inadequate.

Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground.

Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all ignition sources if safe to do so. No smoking, sparks, flames or other sources of ignition near spillage. Do not allow material to enter confined spaces, due to the risk of explosion. Absorb small quantities with paper towels and evaporate in a safe place. Once evaporation is complete, place paper in a suitable waste disposal container and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage

Precautions for safe handling

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Usage precautions

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimize spills. Keep container tightly sealed when not in use. Avoid the formation of mists. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions

Store locked up. Keep away from oxidizing materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage.

Storage class

Flammable liquid storage.

Specific end uses(s)

Specific end use(s)

The identified uses for this product are detailed in Section 1.

8. Exposure controls/Personal protection

Control parameters

Occupational exposure limits

n-butyl acetate

Long-term exposure limit (8-hour TWA): ACGIH 50 ppm 238 mg/m³

Short-term exposure limit (15-minute): ACGIH 150 ppm 712 mg/m³

Long-term exposure limit (8-hour TWA): OSHA 150 ppm 710 mg/m³

amorphous silicon dioxide, chemically prepared

Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³ respirable fraction

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³ total dust

toluene

Long-term exposure limit (8-hour TWA): ACGIH 20 ppm 75 mg/m³

A4

Long-term exposure limit (8-hour TWA): OSHA 200 ppm

Ceiling exposure limit: OSHA 300 ppm

xylene

Long-term exposure limit (8-hour TWA): OSHA 100 ppm 435 mg/m³

Long-term exposure limit (8-hour TWA): ACGIH 100 ppm 434 mg/m³

Short-term exposure limit (15-minute): ACGIH 150 ppm 651 mg/m³

A4

ethylbenzene

Long-term exposure limit (8-hour TWA): OSHA 100 ppm 435 mg/m³

Long-term exposure limit (8-hour TWA): ACGIH 20 ppm 87 mg/m³

A3

ACGIH = American Conference of Governmental Industrial Hygienists.

OSHA = Occupational Safety and Health Administration.

A4 = Not Classifiable as a Human Carcinogen.

A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans.

n-butyl acetate (CAS: 123-86-4)

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**Immediate danger to life
and health** 1700 ppm

amorphous silicon dioxide, chemically prepared (CAS: 7631-86-9)

**Immediate danger to life
and health** 3000 mg/m³

toluene (CAS: 108-88-3)

**Immediate danger to life
and health** 500 ppm

ethylbenzene (CAS: 100-41-4)

**Immediate danger to life
and health** 800 ppm

Exposure controls**Protective equipment****Appropriate engineering
controls**

Provide adequate general and local exhaust ventilation. Ensure the ventilation system is regularly maintained and tested. Good general ventilation should be adequate to control worker exposure to airborne contaminants. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection

No specific hand protection recommended.

**Other skin and body
protection**

Wear appropriate clothing to prevent repeated or prolonged skin contact.

Hygiene measures

Wash hands thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

Respiratory protection

Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

**Environmental exposure
controls**

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties**Information on basic physical and chemical properties**

Appearance	Liquid.
Odor	Solvent or petroleum
Odor threshold	Not determined.

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pH	Not determined or not applicable
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Not applicable or not determined
Evaporation rate	Not determined.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not determined.
Vapor pressure	Not determined.
Vapor density	> 1 (air = 1)
Relative density	1.04
Solubility(ies)	Partial
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Volatile Organic Compounds (VOC)	5.0 lbs/gal; 5.0 lbs/gal exempt

10. Stability and reactivity

Reactivity	There are no known reactivity hazards associated with this product.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	The following materials may react strongly with the product: Oxidizing agents.
Conditions to avoid	Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented.
Materials to avoid	Oxidizing materials. Acids - oxidizing.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information**Information on toxicological effects****Acute toxicity - oral**

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

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ATE dermal (mg/kg)	278,381.17
<u>Acute toxicity - Inhalation</u>	
Notes (Inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Animal data	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitization</u>	
Respiratory sensitization	Based on available data the classification criteria are not met.
<u>Skin sensitization</u>	
Skin sensitization	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - In vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	Contains a substance which may be potentially carcinogenic. IARC Group 2B Possibly carcinogenic to humans.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	STOT SE 3 - H336 May cause drowsiness or dizziness.
Target organs	Central nervous system
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
<u>General information</u>	
Inhalation	The severity of the symptoms described will vary dependent on the concentration and the length of exposure. A single exposure may cause the following adverse effects: Headache. Nausea, vomiting. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Narcotic effect.
Ingestion	No specific symptoms known.
Skin Contact	No specific symptoms known.
Eye contact	No specific symptoms known.
Route of exposure	Ingestion Inhalation Skin and/or eye contact
Target Organs	Central nervous system

5o 2K URETHANE**12. Ecological Information**

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

Toxicity Based on available data the classification criteria are not met.

Persistence and degradability

Persistence and degradability The degradability of the product is not known.

Bioaccumulative potential

Bio-Accumulative Potential No data available on bioaccumulation.

Partition coefficient Not determined.

Mobility in soil

Mobility No data available.

Other adverse effects

Other adverse effects None known.

13. Disposal considerations**Waste treatment methods**

General information The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

14. Transport information**UN Number**

UN No. (TDG) 1263

UN No. (IMDG) 1263

UN No. (ICAO) 1263

UN proper shipping name

Proper shipping name (TDG) PAINT RELATED MATERIAL

Proper shipping name (IMDG) PAINT RELATED MATERIAL

Proper shipping name (ICAO) PAINT RELATED MATERIAL

Transport hazard class(es)

TDG class 3

TDG label(s) 3

IMDG Class 3

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ICAO class/division 3

Transport labels**Packing group**

TDG Packing Group II

IMDG packing group II

ICAO packing group II

Environmental hazards**Environmentally Hazardous Substance**

No.

Special precautions for user

EmS F-E, S-E

15. Regulatory Information**US Federal Regulations****SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The following ingredients are listed or exempt:

n-butyl acetate

Final CERCLA RQ: 5000(2270) pounds (Kilograms)

toluene

Final CERCLA RQ: 1000(454) pounds (Kilograms)

xylene

Final CERCLA RQ: 100(45.4) pounds (Kilograms)

ethylbenzene

Final CERCLA RQ: 1000(454) pounds (Kilograms)

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

SARA 313 Emission Reporting

The following ingredients are listed or exempt:

toluene

1.0 %

xylene

1.0 %

ethylbenzene

0.1 %

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

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SARA (311/312) Hazard Categories

fire acute chronic

OSHA Highly Hazardous Chemicals

None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

The following ingredients are listed or exempt:

toluene

ethylbenzene

Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

n-butyl acetate

toluene

n-butyl methacrylate

2-hydroxyethyl acrylate

amorphous silicon dioxide, chemically prepared

xylene

ethylbenzene

Rhode Island "Right To Know" List

The following ingredients are listed or exempt:

n-butyl acetate

toluene

xylene

ethylbenzene

New Jersey "Right To Know" List

The following ingredients are listed or exempt:

n-butyl acetate

toluene

n-butyl methacrylate

2-hydroxyethyl acrylate

xylene

ethylbenzene

Pennsylvania "Right To Know" List

The following ingredients are listed or exempt:

n-butyl acetate

toluene

n-butyl methacrylate

2-hydroxyethyl acrylate

amorphous silicon dioxide, chemically prepared

xylene

5o 2K URETHANE*ethylbenzene***Inventories****US - TSCA**

All the ingredients are listed or exempt.

16. Other Information

Training advice	Only trained personnel should use this material.
Revision comments	Updated to utilize new authoring software.
Issued by	Health & Safety Department
Revision date	9/6/2019
Revision	7
Supersedes date	5/8/2019
SDS No.	6341
Hazard statements in full	H226 Flammable liquid and vapor. H317 May cause an allergic skin reaction. H336 May cause drowsiness or dizziness. H360D May damage the unborn child.

End of Safety Data Sheet

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.