

Safety Data Sheet

SP-955

1. Product and company identification

Product name : SP-955
Material uses : Industrial applications: Sequestering agent for polyvalent metals.
Internal code : OFS0059
System code : OFS0059
Supplier : Bachman Services, Inc.
 P.O. Box 96265
 Oklahoma City, Oklahoma 73143
Information contact : (800) 535-5053 [Emergency], (405) 677-8296 [Info]
e-mail address of person responsible for this SDS : sdsinfo@innospecinc.com

Emergency telephone number

In USA, Canada and North America, 24 hour / 7 day emergency information for our product is provided by the CHEMTREC® Emergency Call Center based in the USA


Country information	: Emergency telephone number
USA, Canada, Puerto Rico, Virgin Islands	: +1 800 424 9300
In case of difficulties, or for ships at sea	: +1 703 527 3887

In Europe, Middle East, Africa, Asia Pacific and South America 24 hour / 7 day emergency response for our products is provided by the NCEC CARECHEM 24 global network



Country information	Emergency telephone number	Location
South America (all countries)	: +1 215 207 0061	Philadelphia USA
Brazil	: +55 113 711 9144	Brazil
Mexico	: +52 555 004 8763	Mexico
Europe (all countries) Middle East, Africa (French, Portuguese, English)	: +44 (0) 1235 239 670	London, UK
Middle East, Africa (Arabic, French, English)	: +44 (0) 1235 239 671	Lebanon
Asia Pacific (all countries except China)	: +65 3158 1074	Singapore
China	: +86 10 5100 3039	Beijing China

Section 2. Hazards identification

- OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
- Classification of the substance or mixture** : SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
- GHS label elements**
- Hazard pictograms** : 
- Signal word** : Danger
- Hazard statements** : H314 - Causes severe skin burns and eye damage.
- Precautionary statements**
- Prevention** : P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P264 - Wash hands thoroughly after handling.
- Response** : P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician.
P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.
P305 + P351 + P338 + P310 - 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 CENTER or physician.
- Storage** : P405 - Store locked up.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.
- Target organs** : Contains material which causes damage to the following organs: upper respiratory tract, skin, eye, lens or cornea, teeth.
Contains material which may cause damage to the following organs: blood, lungs.

See toxicological information (Section 11)

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
acetic acid	30 - 60	64-19-7
Citric acid	9.99 - 14.99	77-92-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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Section 3. Composition/information on ingredients

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
- Skin contact** : Causes severe burns.
- Ingestion** : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Section 4. First aid measures

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Flash point : Closed cup: >93.3°C (>199.9°F)

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

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Section 6. Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Store locked up. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
acetic acid	<p>ACGIH TLV (United States, 4/2014). TWA: 10 ppm, 0 times per shift, 8 hours. TWA: 25 mg/m³, 0 times per shift, 8 hours. STEL: 15 ppm, 0 times per shift, 15 minutes. STEL: 37 mg/m³, 0 times per shift, 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 10 ppm, 0 times per shift, 8 hours. TWA: 25 mg/m³, 0 times per shift, 8 hours.</p> <p>NIOSH REL (United States, 10/2013). TWA: 10 ppm, 0 times per shift, 10 hours. TWA: 25 mg/m³, 0 times per shift, 10 hours.</p>

Section 8. Exposure controls/personal protection

STEL: 15 ppm, 0 times per shift, 15 minutes.
 STEL: 37 mg/m³, 0 times per shift, 15 minutes.
OSHA PEL (United States, 2/2013).
 TWA: 10 ppm, 0 times per shift, 8 hours.
 TWA: 25 mg/m³, 0 times per shift, 8 hours.

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : 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.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or supplied-air respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	: Liquid.
Color	: Clear.
Odor	: Not available.
Odor threshold	: Not available.
pH	: 1.5 to 2.5
Melting point	: Not available.
Boiling point	: 100°C (212°F)
Flash point	: Closed cup: >93.3°C (>199.9°F)
Evaporation rate	: 1.5
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Greatest known range: Lower: 4% Upper: 16% (acetic acid)
Vapor pressure	: Highest known value: 3.2 kPa (23.8 mm Hg) (at 20°C) (water). Weighted average: 2.54 kPa (19.05 mm Hg) (at 20°C)
Vapor density	: Highest known value: 2.1 (Air = 1) (acetic acid).
Density	: 1.0714 g/cm ³ [15°C (59°F)]
Specific gravity	: Not available.
Density	: 8.89 lbs/gal
Solubility	: Easily soluble in the following materials: cold water, hot water, methanol.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Lowest known value: 425.85 to 462.85°C (798.5 to 865.1°F) (acetic acid).
Decomposition temperature	: Not available.
Viscosity	: Kinematic (40°C (104°F)): 0.04 cm ² /s (4 cSt)
Pour point	: -17.78°C

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Species	Result	Dose
acetic acid	-	Rat	LC50 Inhalation Vapor	11000 mg/m ³
	-	Rabbit	LD50 Dermal	1060 mg/kg
Citric acid	-	Rat	LD50 Oral	3310 mg/kg
	-	Rat	LD50 Oral	3 g/kg

Potential chronic health effects

Not available.

Irritation/Corrosion

Product/ingredient name	Test	Species	Result
Citric acid	-	Rabbit	Eyes - Severe irritant -
	-	Rabbit	Skin - Mild irritant -
	-	Rabbit	Skin - Moderate irritant -

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
acetic acid	Acute EC50 73400 µg/l Fresh water Acute EC50 65 mg/l Acute LC50 50.1 ul/L Marine water Acute LC50 75 mg/l Acute LC50 79 mg/l Acute LC50 88 mg/l	Algae - Navicula seminulum Daphnia Crustaceans - Artemia sp. Fish - Lepomis macrochirus Fish Fish	96 hours 48 hours 48 hours 96 hours 96 hours 96 hours
Citric acid	Acute LC50 160000 µg/l Marine water	Crustaceans - Carcinus maenas - Adult	48 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
acetic acid	-	-	Readily




Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
acetic acid	-0.17	-	low
Citric acid	-1.72	-	low

Section 13. Disposal considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN2790	UN2790	UN2790
UN proper shipping name	Acetic acid solution RQ (acetic acid)	ACETIC ACID SOLUTION	Acetic acid solution
Transport hazard class(es)	8 	8 	8 
Packing group	III	III	III
Environmental hazards	No.	No.	No.

Section 14. Transport information

<p>Additional information</p>	<p>Reportable quantity 14705.9 lbs / 6676.5 kg [1646.2 gal / 6231.5 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p>Limited quantity Yes.</p> <p>Packaging instruction Passenger aircraft Quantity limitation: 5 L</p> <p>Cargo aircraft Quantity limitation: 60 L</p> <p>Special provisions IB3, T4, TP1</p>	<p>Emergency schedules (EmS) F-A, S-B</p>	<p>Passenger and Cargo Aircraft Quantity limitation: 5 L Packaging instructions: 852 Cargo Aircraft OnlyQuantity limitation: 60 L Packaging instructions: 856 Limited Quantities - Passenger AircraftQuantity limitation: 1 L Packaging instructions: Y841</p> <p>Special provisions A803</p>
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Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
acetic acid	30 - 60	Yes.	No.	No.	Yes.	No.
Citric acid	9.99 - 14.99	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: ACETIC ACID

New York : The following components are listed: Acetic acid

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Section 15. Regulatory information

- New Jersey** : The following components are listed: ACETIC ACID; ETHANOIC ACID
- Pennsylvania** : The following components are listed: ACETIC ACID
- California Prop. 65** : CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986. This product is not known to the State of California to cause cancer, birth defects or other reproductive harm.

International lists

National inventory

- Australia inventory (AICS)** : All components are listed or exempted.
- Canada inventory** : All components are listed or exempted.
- China inventory (IECSC)** : All components are listed or exempted.
- Europe inventory** : All components are listed or exempted.
- Japan inventory (ENCS)** : All components are listed or exempted.
- New Zealand Inventory of Chemicals (NZIoC)** : All components are listed or exempted.
- Philippines inventory (PICCS)** : All components are listed or exempted.
- Korea inventory (KECI)** : All components are listed or exempted.
- Taiwan inventory (TCSI)** : All components are listed or exempted.
- United States inventory (TSCA 8b)** : All components are listed or exempted.

Our REACH (pre-) registrations DO NOT cover the following:

- The manufacture of these products by our company outside the EU unless covered by the Only Representative provisions, and
 - The importation of these products into Europe by other companies. Re-importation by other companies is not covered by our (pre-) registrations
- Customers and other third parties importing and/or re-importing our products into Europe will need either:
- Their own (pre-) registration for substances contained in the imported product, or constituent monomers (imported above 1 tonne per year and >2% by weight) in the case of imported polymers, or
 - In the case of importation only, to make use of the "Only Representative" provisions, if available.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		1
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

[Classification according to Directive 67/548/EEC \[DSD\] or Classification according to Directive 1999/45/EC \[DPD\]](#)

- Risk phrases** : R34- Causes burns.
- Safety phrases** : S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

[History](#)

- Date of printing** : 2015-07-24
- Date of issue/Date of revision** : 2015-07-24
- Date of previous issue** : 2015-05-15
- Version** : 1.02
- Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

▣ Indicates information that has changed from previously issued version.

[Notice to reader](#)

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.