



Safety Data Sheet

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Chromic Acid, 10% (w/v)

Product Number: 2077

Other Identifying Product Numbers: 2077-1, 2077-16, 2077-32

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company

Address: 448 West Fork Drive
Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300
CHEMTREC (International) 1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statement	Precautionary Statements
Acute Toxicity - Oral	Category 4	H302	P264, P270, P301+P312, P330, P501
Acute Toxicity - Dermal	Category 2	H310	P262, P264, P270, P280, P352, P310, P321, P361, P405, P501
Acute Toxicity - Inhalation	Category 3	H331	P261, P271, P304+P340, P311, P321, P403+P233, P405, P501
Skin Corrosion / Irritation	Category 1A	H314	P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501
Eye Damage / Irritation	Category 1	H318	P280, P305+P351+P338, P310
Respiratory Sensitizer	Category 1	H334	P261, P285, P304+P341, P342+P311, P501
Skin Sensitizer	Category 1	H317	P261, P272, P280, P302+P352, P332+P313, P321, P363, P501
Germ Cell Mutagenicity	Category 1	H340	P201, P202, P280, P308+P313, P405, P501
Carcinogenicity	Category 1	H350	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 1	H372	P260, P264, P270, P314, P501
Corrosive to Metals	Category 1	H290	P234, P390, P406
Hazardous to the Aquatic Environment (Acute)	Category 2	H401	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 2	H401	P273, P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**



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Hazard Statements:

Hazard Number	Hazard Statement
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life.



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Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P234	Keep only in original container.
P260	Do not breathe fumes, mist, vapors, or spray.
P261	Avoid breathing fumes, mist, vapors, or spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P285	In case of inadequate ventilation wear respiratory protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P304+P341	IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P311	Call a POISON CENTER or physician.
P314	Get medical attention if you feel unwell.
P321	Specific treatment (Wash areas of contact with water immediately).
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or physician.
P352	Wash with plenty of soap and water.
P361	Take off immediately all contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents in accordance with local, state, federal and international regulations.



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2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H ₂ O	18.01 g/mol	7732-18-5	90.66%
Chromium (VI) Oxide	CrO ₃	99.99 g/mol	1333-82-0	9.34%

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Corrosive! Causes irritation and burns. Can cause burns that may lead to permanent impairment of vision, including blindness.

Inhalation: IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation, dermatitis, redness and pain. May be absorbed through skin on prolonged exposure.

Ingestion: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Vomiting may occur spontaneously but do not induce. Call a physician immediately.

4.2. Most Important Symptoms and Effects, Acute and Delayed

DANGER! Corrosive. May be harmful if swallowed. Contains Hexavalent Chromium compound, which is a known carcinogen. If swallowed, do not induce vomiting. Give large quantity of water. Call a physician. Wash areas of contact with water for at least 15 minutes. For eyes, get medical attention. EYE CONTACT: Corrosive! Causes irritation and burns. Can cause burns that may lead to permanent impairment of vision, including blindness. SKIN CONTACT: May cause irritation, dermatitis, redness and pain. May be absorbed through skin on prolonged exposure. CHRONIC EFFECTS / CARCINOGENICITY: May affect the skin, liver, kidneys and blood.

4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately).



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SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Dry chemical, foam, water, or carbon dioxide.

5.2. Specific Hazards Arising from the Substance or Mixture

Slight fire hazard when subject to high heat, containers may explode in fire.

5.3. Special Protective Equipment for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2. Cleanup and Containment Methods and Materials

Collect liquid and dilute with water. Do not flush to sewer. Containerize for proper disposal. For larger spills, absorb with suitable material (vermiculite, clay, etc.). Collect the solid residue and save for disposal.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Empty containers may be hazardous since they retain product residues. Store at room temperature.



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SECTION 8: Exposure Controls / Personal Protection

8.1. Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Chromium (VI) Oxide (1333-82-0)	TWA	USA	5 µg/m³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Chromium (VI) Oxide (1333-82-0)	TLV-TWA	USA	0.05 mg/m³ TWA (as Cr)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Chromium (VI) Oxide (1333-82-0)	PEL-Ceiling	USA	0.1 mg/m³ Ceiling (applies to any operations or sectors for which the Hexavalent Chromium standard [29 CFR 1910.1026] is stayed or is otherwise not in effect, as CrO ₃)	U.S. - OSHA - Final PELs - Ceiling Limits
Chromium (VI) Oxide (1333-82-0)	PEL	USA	5 µg/m³ TWA (See 29 CFR 1910.1026, U.S. - OSHA - Specifically Regulated as Cr) 2.5 µg/m³ Action Level (as Cr)	Chemicals with PELs

8.2. Exposure Controls

Engineering Controls: Use only outdoors or in a well-ventilated area. No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. If necessary, wear a respirator equipped with an acid gas cartridge.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves.

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. If necessary, wear a respirator equipped with an acid gas cartridge. Chemical resistant gloves. Safety glasses or goggles.



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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Orange liquid

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: Data not available.

Melting/Freezing Point: Data not available.

Initial Boiling Point /Range: Data not available.

Flash Point: Data not available.

Evaporation Rate: Data not available.

Flammability: Data not available.

Flammability/Explosive Limits: Data not available.

Vapor Pressure: Data not available.

Vapor Density: Data not available.

Relative Density: 1.07

Solubility: Miscible

Partition Coefficient (n-Octanol/Water): Data not available.

Auto-Ignition Temperature: Data not available.

Decomposition Temperature: Data not available.

Viscosity: Data not available.

Explosive Properties: Data not available.

Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep only in original container. Ordinary combustible materials (such as paper, wood, cloth and oil), halogens, reducing agents, organic compounds, hydrogen sulfide, phosphorus and heat. Contact with combustible material may cause fire.



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10.4. Hazardous Decomposition Products

Will not occur.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Harmful if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Dermal Exposure:

Fatal in contact with skin. Do not get in eyes, on skin, or on clothing. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves and eye protection. Wash with plenty of soap and water. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Take off immediately all contaminated clothing and wash it before reuse. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Inhalation Exposure:

Toxic if inhaled. Avoid breathing fumes, mist, vapors, or spray. Use only outdoors or in a well-ventilated area. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Other Information:

LD50, Oral, Rat: 80 mg/kg (Chromium Trioxide), respiratory, hair and gastrointestinal effects noted.

Skin Corrosion and Irritation:

Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water immediately). 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 in accordance with local, state, federal and international regulations.

Serious Eye Damage and Irritation:

Causes serious eye damage. Wear protective gloves and eye protection. 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.

Respiratory Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing fumes, mist, vapors, or spray. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.



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Skin Sensitization:

May cause an allergic skin reaction. Avoid breathing fumes, mist, vapors, or spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water immediately). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

Germ Cell Mutagenicity:

May cause genetic defects. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Carcinogenicity:

May cause cancer. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Reproductive Toxicity:

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.



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12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

Sizes: 1 L, 4 L, 500 mL

UN Number: UN1755

Proper Shipping Name: Chromic Acid Solution

Hazard Class: 8

Packing Group: II

Hazard Placard Labels:



Sizes:

UN Number:

Proper Shipping Name:

Hazard Class:

Packing Group:

Hazard Placard Labels:



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14.2. Transportation by Air - International Air Transport Association (IATA)

Sizes: 1 L, 4 L, 500 mL

UN Number: UN1755

Proper Shipping Name: Chromic Acid Solution

Hazard Class: 8

Packing Group: II

Hazard Placard Labels:



SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Chromium (VI) Oxide (CAS # 1333-82-0): 5 µg/m³ TWA (See 29 CFR 1910.1026, as Cr); 2.5 µg/m³ Action Level (as Cr)

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Not listed.

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Chromium (VI) Oxide (CAS # 1333-82-0): 0.1 % de minimis concentration (except for Chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the Chromite ore processing residue (COPR), Chemical Category N090)

15.5. Massachusetts Right-to-Know Substance List

Chromium (VI) Oxide (CAS # 1333-82-0): Carcinogen; Extraordinarily hazardous

15.6. Pennsylvania Right-to-Know Hazardous Substances

Chromium (VI) Oxide (CAS # 1333-82-0): Environmental hazard

Chromium (VI) Oxide (CAS # 1333-82-0): Environmental hazard; Special hazardous substance

Chromium (VI) Oxide (CAS # 1333-82-0): Present

Chromium (VI) Oxide (CAS # 1333-82-0): Special hazardous substance

Water (CAS # 7732-18-5): Present



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15.7. New Jersey Worker and Community Right-to-Know Components

Chromium (VI) Oxide (CAS # 1333-82-0): carcinogen
Chromium (VI) Oxide (CAS # 1333-82-0): carcinogen; teratogen
Chromium (VI) Oxide (CAS # 1333-82-0): sn 0437
Chromium (VI) Oxide (CAS # 1333-82-0): sn 2245
Chromium (VI) Oxide (CAS # 1333-82-0): SN 2245 500 lb TPQ (Category Code N090)
Chromium (VI) Oxide (CAS # 1333-82-0): sn 3575

15.8. California Proposition 65

Chromium (VI) Oxide (CAS # 1333-82-0): 0.001 µg/day NSRL (inhalation)
Chromium (VI) Oxide (CAS # 1333-82-0): carcinogen, 2/27/1987
Chromium (VI) Oxide (CAS # 1333-82-0): developmental toxicity, 12/19/2008
Chromium (VI) Oxide (CAS # 1333-82-0): female reproductive toxicity 12/19/08
Chromium (VI) Oxide (CAS # 1333-82-0): male reproductive toxicity, 12/19/08

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chromium (VI) Oxide (CAS # 1333-82-0): Present (DSL)
Water (CAS # 7732-18-5): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

Chromium (VI) Oxide (CAS # 1333-82-0): Present [R]
Water (CAS # 7732-18-5): Present

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Not listed.



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SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

May be corrosive to metals. Harmful if swallowed. Fatal in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep only in original container. Do not breathe fumes, mist, vapors, or spray. Do not get in eyes, on skin, or on clothing. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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. IF exposed or concerned: Get medical attention. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water immediately). If skin irritation occurs: Get medical attention. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in corrosive resistant container with a resistant inner liner.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

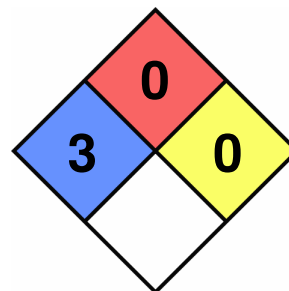
Canadian Carcinogenicity Hazard Class: Not Applicable.

Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.
Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 3
Flammability: 0
Reactivity: 0
Special Hazard:





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16.4. Document Revision

Last Revision Date: 5/1/2015

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.