



## Safety Data Sheet

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation:** Crystal Violet, 0.2% (w/v) in Acetic Acid

**Product Number:** C-2635

**Other Identifying Product Numbers:** C-2635-500ML

#### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

#### 1.3. Details of the Supplier of the Safety Data Sheet

**Company:** Reagents Inc.

**Address:** 4746 Sweden Road  
Charlotte, NC 28224 USA

**Telephone:** 800-732-8484

#### 1.4. Emergency Telephone Number (24 hr)

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

## Safety Data Sheet

### 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 4 | H312             | P280, P302+P352, P312, P321, P362, P501                                                                   |
| Acute Toxicity - Inhalation                                          | Category 4 | H332             | P261, P271, P304+P340, P312                                                                               |
| Skin Corrosion / Irritation                                          | Category 1 | 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                                                                    |
| Carcinogenicity                                                      | Category 1 | H350             | P201, P202, P280, P308+P313, P405, P501                                                                   |
| Reproductive Toxicity                                                | Category 2 | H361             | P201, P202, P280, P308+P313, P405, P501                                                                   |
| Specific Target Organs/Systemic Toxicity Following Single Exposure   | Category 1 | H370             | P260, P264, P270, P307+P311, P321, P405, P501                                                             |
| Specific Target Organs/Systemic Toxicity Following Repeated Exposure | Category 2 | H373             | P260, P314, P501                                                                                          |
| Flammable Liquids                                                    | Category 3 | H226             | P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, P501                      |
| Corrosive to Metals                                                  | Category 1 | H290             | P234, P390, P406                                                                                          |
| Hazardous to the Aquatic Environment (Acute)                         | Category 3 | H402             | P273, P501                                                                                                |

#### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

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### Hazard Statements:

| Hazard Number | Hazard Statement                                                           |
|---------------|----------------------------------------------------------------------------|
| H226          | Flammable liquid and vapor.                                                |
| H290          | May be corrosive to metals.                                                |
| H302          | Harmful if swallowed.                                                      |
| H312          | Harmful in contact with skin.                                              |
| H314          | Causes severe skin burns and eye damage.                                   |
| H318          | Causes serious eye damage.                                                 |
| H332          | Harmful if inhaled.                                                        |
| H334          | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H350          | May cause cancer.                                                          |
| H361          | Suspected of damaging fertility or the unborn child.                       |
| H370          | Causes damage to organs.                                                   |
| H373          | May cause damage to organs through prolonged or repeated exposure.         |
| H402          | Harmful 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.                                                        |
| P210                 | Keep away from heat, sparks and open flame. No smoking.                                                                          |
| P233                 | Keep container tightly closed.                                                                                                   |
| P234                 | Keep only in original container.                                                                                                 |
| P240                 | Ground container and receiving equipment.                                                                                        |
| P241                 | Use explosion-proof equipment.                                                                                                   |
| P242                 | Use only non-sparking tools.                                                                                                     |
| P243                 | Take precautionary measures against static discharge.                                                                            |
| P260                 | Do not breathe dust, fumes or mist.                                                                                              |
| P261                 | Avoid breathing dust, fumes or mist.                                                                                             |
| 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.                                                                                  |
| 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. |
| P307+P311            | IF exposed: Call a POISON CENTER or physician.                                                                                   |
| P308+P313            | IF exposed or concerned: Get medical attention.                                                                                  |
| P310                 | Immediately call a POISON CENTER or physician.                                                                                   |
| P312                 | Call a POISON CENTER or physician if you feel unwell.                                                                            |
| P314                 | Get medical attention if you feel unwell.                                                                                        |
| P321                 | Specific treatment (Wash areas of contact with water).                                                                           |
| P330                 | Rinse mouth.                                                                                                                     |
| P342+P311            | If experiencing respiratory symptoms: Call a POISON CENTER or physician.                                                         |
| P362                 | Take off contaminated clothing and wash it before reuse.                                                                         |
| P363                 | Wash contaminated clothing before reuse.                                                                                         |
| P390                 | Absorb spillage to prevent material damage.                                                                                      |
| P405                 | Store locked up.                                                                                                                 |

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|      |                                                                                             |
|------|---------------------------------------------------------------------------------------------|
| P406 | Store in corrosive resistant container with a resistant inner liner.                        |
| P501 | Dispose of contents in accordance with local, state, federal and international regulations. |

### 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% |
|----------------|--------------------------------------------------|------------------|------------|---------|
| Acetic Acid    | CH <sub>3</sub> COOH                             | 60.05 g/mol      | 64-19-7    | 99.81%  |
| Gentian Violet | C <sub>25</sub> H <sub>30</sub> ClN <sub>3</sub> | 407.97 g/mol     | 548-62-9   | 0.19%   |

## 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. Eye contact may cause severe eye damage followed by loss of sight. Vapor exposure may cause watering and irritation to eyes.

**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 serious damage to the skin. Effects may include redness, pain, skin burns.

**Ingestion:** IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

### 4.2. Most Important Symptoms and Effects, Acute and Delayed

Danger! Corrosive liquid. May be fatal if swallowed. Causes severe burns to all areas of contact. Harmful if inhaled. Inhalation may cause lung and tooth damage. Immediately wash areas of contact with plenty of water for at least 15 minutes. If ingested, give large quantity of water. Do not induce vomiting. Crystal Violet contains a potential carcinogen. EYE CONTACT: Eye contact may cause severe eye damage followed by loss of sight. Vapor exposure may cause watering and irritation to eyes. SKIN CONTACT: May cause serious damage to the skin. Effects may include redness, pain, skin burns. CHRONIC EFFECTS / CARCINOGENICITY: Repeated exposures may cause erosion of exposed front teeth, darkening of skin and chronic inflammation of the nose, throat and bronchial tubes.

### 4.3. Medical Attention or Special Treatment Needed

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

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### SECTION 5: Fire-Fighting Measures

#### 5.1. Extinguishing Media

Water spray, dry chemical, alcohol foam, carbon dioxide

#### 5.2. Specific Hazards Arising from the Substance or Mixture

Flammable liquid and vapor. Combustible liquid. Combustion may produce irritants and toxic gases. (glacial)

#### 5.3. Special Protective Equipment for Firefighters

Wear special protective clothing and positive pressure self-contained breathing apparatus. Butyl rubber, Teflon, Viton, or Saranex barrier recommended. (glacial)

### SECTION 6: Accidental Release Measures

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

#### 6.2. Cleanup and Containment Methods and Materials

Use water spray to cool and disperse vapors, protect personnel, and dilute spills to form nonflammable mixtures. Use soda ash to neutralize spills. Control runoff and isolate discharged material for proper disposal. (glacial)

### 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. Do not mix with bases. Store at 15oC (59oF) or above to prevent crystallization.

### SECTION 8: Exposure Controls / Personal Protection

#### 8.1. Control Parameters

| Chemical Name         | Limit Type | Country | Exposure Limit                         | Information Source                                                     |
|-----------------------|------------|---------|----------------------------------------|------------------------------------------------------------------------|
| Acetic Acid (64-19-7) | TWA        | USA     | 10 ppm TWA<br>25 mg/m <sup>3</sup> TWA | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)               |
| Acetic Acid (64-19-7) | TLV-STEL   | USA     | 15 ppm STEL                            | ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL) |
| Acetic Acid (64-19-7) | TLV-TWA    | USA     | 10 ppm TWA                             | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)      |

#### 8.2. Exposure Controls

**Engineering Controls:** Use only outdoors or in a well-ventilated area. Work in fume hood.

**Respiratory Protection:** In case of inadequate ventilation wear respiratory protection. Work with adequate ventilation or wear respirator with acid gas/organic vapor cartridge.

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**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. Work with adequate ventilation or wear respirator with acid gas/organic vapor cartridge. Chemical resistant gloves. Safety glasses or goggles.

## SECTION 9: Physical and Chemical Properties

### 9.1. Basic Physical and Chemical Properties

**Appearance:** Dark blue to violet/purple liquid

**Physical State:** Liquid

**Odor:** Strong, vinegar, lachrymator

**Odor Threshold:** 0.074 Ppm

**pH:** < 2

**Melting/Freezing Point:** 16.64°C

**Initial Boiling Point /Range:** Approximately 118°C - Approximately 118°C

**Flash Point:** 39°C

**Evaporation Rate:** 0.97 (butyl acetate = 1)

**Flammability:** Data not available.

**Flammability/Explosive Limits:** Data not available.

**Vapor Pressure:** 11.4 mmHg at 20°C

**Vapor Density:** 2.1

**Relative Density:** 1.05

**Solubility:** Miscible

**Partition Coefficient (n-Octanol/Water):** -0.31 at 20 °C

**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.



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### 10.2. Possibility of Hazardous Reactions

Data not available.

### 10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Keep only in original container. Strong bases, strong

### 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:

Harmful in contact with skin. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. Specific treatment (Wash areas of contact with water). Take off contaminated clothing and wash it before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

#### Acute Toxicity - Inhalation Exposure:

Harmful if inhaled. Avoid breathing dust, fumes or mist. 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 if you feel unwell.

#### Acute Toxicity - Other Information:

LD50, Oral, Rat (Acetic Acid): 3310 mg/kg, (Crystal Violet) 420 mg/kg; LD50, Dermal, Rabbit (Acetic Acid): 1.06 g/kg, details of toxic effects not reported other than lethal dose value; LC50, Inhalation, Mouse (Acetic Acid): 5620 ppm/1 hr., eye and blood effects noted. Crystal Violet is investigated as a tumorigen.

#### Skin Corrosion and Irritation:

Causes severe skin burns and eye damage. Do not breathe dust, fumes or mist. 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). 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.



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### Respiratory Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing dust, fumes or mist. 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.

### Skin Sensitization:

Not applicable.

### Germ Cell Mutagenicity:

Not applicable.

### 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:

Suspected of damaging 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:

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

### Specific Target Organ Toxicity from Repeated Exposure:

May cause damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. 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

Harmful 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.

### 12.4. Mobility in Soil

Data not available.

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### 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)

UN Number: UN2789

Proper Shipping Name: Acetic Acid Solution

Hazard Class: 8 (3)

Packing Group: II

Hazard Placard Labels:



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

UN Number: UN2789

Proper Shipping Name: Acetic Acid Solution

Hazard Class: 8 (3)

Packing Group: II

Hazard Placard Labels:



## SECTION 15: Regulatory Information

### 15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

### 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

Acetic Acid (CAS # 64-19-7): 5000 lb final RQ; 2270 kg final RQ



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

Not listed.

### 15.5. Massachusetts Right-to-Know Substance List

Acetic Acid (CAS # 64-19-7): Present

### 15.6. Pennsylvania Right-to-Know Hazardous Substances

Acetic Acid (CAS # 64-19-7): Environmental hazard

Acetic Acid (CAS # 64-19-7): Present

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

Acetic Acid (CAS # 64-19-7): corrosive

Acetic Acid (CAS # 64-19-7): sn 0004

### 15.8. California Proposition 65

Not listed.

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

Gentian Violet (CAS # 548-62-9): Present

Acetic Acid (CAS # 64-19-7): Present

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

Gentian Violet (CAS # 548-62-9): Present

Acetic Acid (CAS # 64-19-7): 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

Flammable liquid and vapor. May be corrosive to metals. Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. Suspected of damaging fertility or the unborn child. Causes damage to organs. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Keep only in original container. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust, fumes or mist. 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. 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: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water). If experiencing respiratory symptoms: Call a POISON CENTER or physician. Take off contaminated clothing and wash it before reuse. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Absorb spillage to prevent material damage.

Store in a well-ventilated place. Keep cool.

#### 16.2. Miscellaneous Hazard Classes

**Canadian Carcinogenicity Hazard Class:** Not Applicable.

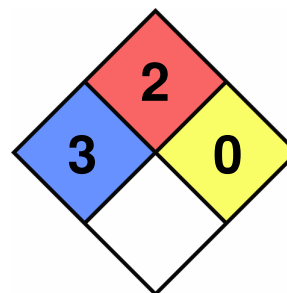
**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

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

**Biohazardous Infectious Materials Hazard Class:** Not Applicable.

#### 16.3. National Fire Protection Association (NFPA) Rating

**Health:** 3  
**Flammability:** 2  
**Reactivity:** 0  
**Special Hazard:**





## Safety Data Sheet

### 16.4. Document Revision

**Last Revision Date:** 6/23/2015

#### 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 REAGENTS, INC. assumes no legal responsibility or liability whatsoever resulting from its use.