SAFETY DATA SHEET

Preparation Date: 5/27/2014  Revision Date: 4/26/2018  Revision Number: G4

1. IDENTIFICATION

Product identifier

Product code: A1010
Product Name: ACETIC ACID, GLACIAL, REAGENT, ACS

Other means of identification

Synonyms: Glacial Acetic Acid
CAS #: 64-19-7
RTECS #: AF1225000
Cl#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Laboratory reagent.
Uses advised against: No information available

Supplier:

Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: https://www.spectrumchemical.com

Emergency telephone number: Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

<table>
<thead>
<tr>
<th>Acute toxicity - Dermal</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Vapors)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1 Sub-category A</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Label elements

Danger

Hazard statements
Harmful in contact with skin
Harmful if inhaled
Causes severe skin burns and eye damage
Flammable liquid and vapor
Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
May be harmful if swallowed
Harmful to aquatic life with long lasting effects
Harmful to aquatic life

Precautionary Statements - Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/.../equipment
Use only non-sparking tools
Take precautionary measures against static discharge

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
In case of fire: Use CO2, dry chemical, or foam to extinguish.
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 doctor/physician.
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

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

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Product code: A1010  Product name: ACETIC ACID, GLACIAL, REAGENT, ACS
First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact: Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.

Eye Contact: Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Call a physician immediately.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If victim is conscious, give water or milk. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms
- Severe skin and eye irritation or burns
- May cause abdominal pain, nausea, vomiting, diarrhea
- Burning sensation in the mouth and stomach
- Can burn mouth, throat, and stomach
- Thirst
- Irritating to respiratory system
- May cause bronchitis
- May cause build-up of fluid in the lungs (pulmonary edema)
- Dyspnea (Shortness of breath and difficulty breathing)
- Coughing and wheezing
- Sneezing
- May cause central nervous system effects
- Convulsions
- Blackening and erosion of teeth

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders
First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Alcohol-resistant foam. Water spray.

Unsuitable Extinguishing Media: Do not use a solid (straight) water stream as it may scatter and spread fire.

Product code: A1010
Product name: ACETIC ACID, GLACIAL, REAGENT, ACS
Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon Monoxide, Carbon Dioxide.

Specific hazards:
Flammable. May be ignited by heat, sparks or flames. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks). Container explosion may occur under fire conditions or when heated. Fire may produce irritating, corrosive and/or toxic gases.

Special Protective Actions for Firefighters

Specific Methods: Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk.

Methods for cleaning up Neutralize with Sodium carbonate or Sodium bicarbonate. Dilute with water. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions: Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice
Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Technical Measures/Storage Conditions:**
Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials.

**Incompatible Materials:**
- Oxidizing agents
- Reducing agents
- Metals
- Bases
- Acids

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**National occupational exposure limits**

**United States**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WEEL</th>
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<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>10 ppm TWA</td>
<td>10 ppm TWA</td>
<td>15 ppm STEL</td>
<td>None</td>
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<td></td>
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<td>25 mg/m³ TWA</td>
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<td>10 ppm TWA</td>
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<td></td>
<td></td>
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<td>15 ppm STEL</td>
<td>10 ppm TWA</td>
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<td></td>
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<td>37 mg/m³ STEL</td>
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**Canada**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Canada - Alberta</th>
<th>Canada - British Columbia</th>
<th>Canada - Ontario</th>
<th>Canada - Quebec</th>
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<tbody>
<tr>
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<td>64-19-7</td>
<td>10 ppm TWA</td>
<td>10 ppm TWA</td>
<td>10 ppm TWA</td>
<td>10 ppm TWAAEV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 mg/m³ TWA</td>
<td>25 mg/m³ TWA</td>
<td>15 ppm STEL</td>
<td>25 mg/m³ TWAAEV</td>
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<tr>
<td></td>
<td></td>
<td>15 ppm STEL</td>
<td>15 ppm STEL</td>
<td>15 ppm STEV</td>
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<td></td>
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<td>37 mg/m³ STEL</td>
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**Australia and Mexico**

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<th>Mexico</th>
</tr>
</thead>
<tbody>
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<td>Acetic Acid, glacial</td>
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<td>10 ppm TWA</td>
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<td>37 mg/m³ STEL</td>
<td>25 mg/m³ TWA</td>
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<tr>
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<tr>
<td></td>
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<td></td>
<td>15 ppm STEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>37 mg/m³ STEL</td>
</tr>
</tbody>
</table>

**Appropriate engineering controls**

**Engineering measures to reduce exposure:** Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

**Individual protection measures, such as personal protective equipment**

**Product code:** A1010  **Product name:** ACETIC ACID, GLACIAL, REAGENT, ACS
Personal Protective Equipment

**Eye protection:** Face-shield and Goggles

**Skin and body protection:** Chemical resistant protective suit
Gloves
Boots

**Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Molecular/Formula weight</td>
<td>60.05</td>
</tr>
<tr>
<td>Flammability</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition Temperature (°C/°F)</td>
<td>463 °C/865 °F</td>
</tr>
<tr>
<td>Melting point/range(°C/°F)</td>
<td>16.6 °C/619. °F</td>
</tr>
<tr>
<td>Boiling point/range(°C/°F)</td>
<td>118.1 °C/244.6 °F</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.049</td>
</tr>
<tr>
<td>pH</td>
<td>pH of a 1% solution: 2 [Acidic]</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor threshold (ppm)</td>
<td>0.48</td>
</tr>
<tr>
<td>Miscibility</td>
<td>Miscible with alcohol</td>
</tr>
<tr>
<td>Miscible with Benzene</td>
<td>Miscible with Carbon tetrachloride</td>
</tr>
<tr>
<td>Miscible with Glycerol</td>
<td>Miscible with alcohol, Benzene, Carbon tetrachloride, Glycerol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Freely soluble in water, Soluble in Acetone, Soluble in Ether, Practically insoluble in Carbon tetrachloride</td>
</tr>
</tbody>
</table>

## 10. STABILITY AND REACTIVITY

**Reactivity** Reacts violently with strong oxidizing agents, acetaldehyde, and acetic anhydride. It can react with metals, strong bases, amines, carbonates, hydroxides, phosphates, many oxides, cyanides, sulfides, chromic acid, nitric acid, hydrogen peroxide, carbonates, ammonium nitrate, ammonium thiocyanate, chlorine trifluoride, chlorosulfonic acid, perchloric acid, permanganates, xylene, oleum, potassium hydroxide, sodium hydroxide, phosphorus isocyanate, ethylenediamine, ethylene imine. Acetic acid vapors may form explosive mixtures with air. Reactions between acetic acid and the following materials are potentially explosive: 5-azidotetrazole, bromine pentfluoride, chromium trioxide, hydrogen peroxide, potassium permanganate, sodium peroxide, and phosphorus trichloride. Dilute acetic acid and dilute hydrogen can undergo an exothermic reaction if heated, forming peracetic acid which is

**Product code:** A1010  **Product name:** ACETIC ACID, GLACIAL, REAGENT, ACS
explosive at 110 degrees C. Reaction between chlorine trifluoride and acetic acid is very violent, sometimes explosive.

**Chemical stability**

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials.

**Incompatible Materials:**
- Oxidizing agents
- Reducing agents
- Metals
- Bases
- Acids

**Hazardous decomposition products:** Carbon oxides.

**Other Information**

**Corrosivity:**
- Highly corrosive in the presence of stainless steel (304)
- Slightly corrosive in presence of aluminum
- Non-corrosive in presence of stainless steel (316)
- Moderate corrosive effect on bronze

**Special Remarks on Corrosivity:** No corrosion data on brass

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### 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Principal Routes of Exposure:**
- Skin
- Ingestion
- Inhalation
- Eyes

**Acute Toxicity**

**Component Information**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>LD50/oral/rat</th>
<th>LD50/oral/mouse</th>
<th>LD50/dermal/rabbit</th>
<th>LD50/dermal/rat</th>
<th>LC50/inhalation/rat</th>
<th>LC50/inhalation/mouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>3310 mg/kg Oral LD50 Rat</td>
<td>3530 mg/kg</td>
<td>1060 mg/kg Dermal LD50 Rabbit</td>
<td>No information available</td>
<td>11.4 mg/L Inhalation LC50 Rat 4 h</td>
<td>5620 ppm 1 h</td>
</tr>
</tbody>
</table>

**Product Information**

<table>
<thead>
<tr>
<th>LD50/oral/rat</th>
<th>VALUE- Acute Tox Oral = 3310 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50/oral/mouse</td>
<td>Value - Acute Tox Oral = 3530 mg/kg</td>
</tr>
</tbody>
</table>

**Product code:** A1010

**Product name:** ACETIC ACID, GLACIAL, REAGENT, ACS
LD50/dermal/rabbit
VALUE - Acute Tox Dermal = 1060 mg/kg

LD50/dermal/rat
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = 11.4 mg/l (4-hr)
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = 5620 ppm 1 hr
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Corrosive. Severe skin irritation. Causes skin burns. Can cause burning pain, inflammation and blisters. Harmful in contact with skin. May be absorbed through the skin in harmful amounts.


Inhalation Harmful by inhalation. Causes severe respiratory tract irritation. May cause chemical pneumonitis, bronchitis, and pulmonary edema. Severe exposure may result in lung tissue damage and corrosion (ulceration) of the mucous membranes. Inhalation may also cause rhinitis, sneezing, coughing, oppressive feeling in the chest or chest pain, dyspnea, wheezing, tachypnea, cyanosis, salivation, nausea, giddiness, muscular weakness.

Ingestion Causes digestive (gastrointestinal) tract irritation. Causes digestive or gastrointestinal tract burns. Symptoms include burning and pain of the mouth, throat, and abdomen, coughing, ulceration, bleeding, nausea, abdominal spasms, vomiting, hematemesis, diarrhea. May cause perforation of the digestive tract. May cause permanent damage of the esophagus and digestive tract. May also affect the liver (impaired liver function), behavior (convulsions, giddiness, muscular weakness), and the urinary system - kidneys (Hematuria, Albuminuria, Nephrosis, acute renal failure, acute tubular necrosis). May also cause dyspnea or asphyxia. May also lead to shock, coma and death. May cause thirst.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Chronic exposure via ingestion may cause blackening or erosion of the teeth and jaw necrosis, pharyngitis, and gastritis. It may also behave (similar to acute ingestion), and metabolism (weight loss).
Chronic exposure via inhalation may cause asthma and/or bronchitis with cough, wheezing, phlegm, and/or shortness of breath. Some researchers consider acetic acid capable of causing a syndrome known as "reactive airways dysfunction." or RADS. This syndrome resembles bronchial asthma, but differs in that exposure to small doses does not cause a reaction a few weeks after onset. It may also affect the blood (decreased leukocyte count), and urinary system (kidneys). Repeated or prolonged skin contact may cause thickening, blackening, and cracking of the skin.
Sensitization: No information available.

Mutagenic Effects: Mutations in microorganisms
Experiments with bacteria and/or yeast have shown mutagenic effects
Cytogenetic analysis - hamster ovary
Sister Chromatid Exchange (human lymphocyte)

Carcinogenic effects: Not considered carcinogenic.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>IARC</th>
<th>ACGIH - Carcinogens</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
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</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

ACGIH (American Conference of Governmental Industrial Hygienists)
IARC (International Agency for Research on Cancer)
NTP (National Toxicology Program)
OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity: No data is available
Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity
STOT - single exposure: No information available.
STOT - repeated exposure: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Acetic Acid, glacial - 64-19-7

Freshwater Fish Species Data: 79 mg/L LC50 Pimephales promelas 96 h static 1 75 mg/L LC50 Lepomis macrochirus 96 h static 1
Water Flea Data: 65 mg/L EC50 Daphnia magna 48 h 47 mg/L EC50 Daphnia magna 24 h

Persistence and degradability: No information available
Bioaccumulative potential: No information available.
Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods
Waste from residues / unused products:

Product code: A1010  Product name: ACETIC ACID, GLACIAL, REAGENT, ACS
Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**
Empty containers should be taken for local recycling, recovery or waste disposal

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**14. TRANSPORT INFORMATION**

**DOT**
- **UN-No:** UN2789
- **Proper Shipping Name:** Acetic acid solution
- **Hazard Class:** 8
- **Subsidiary Class:** 3
- **Packing group:** II
- **Emergency Response Guide Number:** No information available
- **Marine Pollutant:** No data available
- **DOT RQ (lbs):** No information available
- **Special Provisions:** No Information available
- **Symbol(s):** [DOT]: (R5) - Identifies a material that is a hazardous substance that has a reportable quantity (RQ) of 5000 pounds (2270 Kilograms).
- **Description:** UN2789,Acetic acid, glacial ,8,(3),,PG II

**TDG (Canada)**
- **UN-No:** UN2789
- **Proper Shipping Name:** Acetic acid solution
- **Hazard Class:** 8
- **Subsidiary Risk:** 3
- **Packing Group:** II
- **Marine Pollutant:** No Information available
- **Description:** ACETIC ACID, GLACIAL,8,UN2789,PG II

**ADR**
- **UN-No:** UN2789
- **Proper Shipping Name:** Acetic acid solution
- **Hazard Class:** 8
- **Packing Group:** II
- **Subsidiary Risk:** 3
- **Description:** UN2789 Acetic acid, glacial,8,II

**IMO / IMDG**
- **UN-No:** UN2789
- **Proper Shipping Name:** Acetic acid solution
- **Hazard Class:** 8
- **Subsidiary Risk:** 3
- **Packing Group:** II
- **Marine Pollutant:** No information available
- **EMS:** F-E

**RID**
- **UN-No:** UN2789
- **Proper Shipping Name:** Acetic acid solution
- **Hazard Class:** 8
- **Subsidiary Risk:** 8 + 3
- **Packing Group:** II

**Product code:** A1010  **Product name:** ACETIC ACID, GLACIAL, REAGENT, ACS
Description: UN2789 Acetic acid, glacial,8,II,RID

ICAO
UN-No: UN2789
Proper Shipping Name: Acetic acid solution
Hazard Class: 8
Subsidiary Risk: 3
Packing Group: II
Description: Acetic acid, glacial,8(3),UN2789,PG II

IATA
UN-No: UN2789
Proper Shipping Name: Acetic acid solution
Hazard Class: 8
Subsidiary Risk: 3
Packing Group: II
ERG Code: 8F
Special Provisions No information available
Description: UN2789,Acetic acid, glacial,8(3),PG II

15. REGULATORY INFORMATION

International Inventories

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
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<td>Present 200-580-7</td>
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</table>

U.S. Regulations

Acetic Acid, glacial

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 0004
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List: Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances: 5000 lb RQ
100 lb RQ
Louisiana Reportable Quantity List for Pollutants: 5000lbfinal RQ
2270kgfinal RQ
California Directors List of Hazardous Substances: Present
FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1005
FDA - 21 CFR - Total Food Additives 133.123, 133.124, 133.169, 133.173, 133.178, 133.179, 172.814, 173.370, 184.1005, 73.85


Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

CERCLA/SARA

Product code: A1010  Product name: ACETIC ACID, GLACIAL, REAGENT, ACS
<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>5000 lb final RQ 2270 kg final RQ</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**U.S. TSCA**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**Canada**

**WHIMIS 2015 - GHS Classifications**

WHIMIS 2015 Hazard Classification Information:

<table>
<thead>
<tr>
<th>Component</th>
<th>WHIMIS 2015 Hazard Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>Flammable liquids - Category 3: H226 Flammable liquid and vapour.; Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Acute toxicity - Inhalation - Category 4: H332 Harmful if inhaled.; Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.</td>
</tr>
</tbody>
</table>

**Canada Hazardous Products Regulation**

This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR.

**WHIMIS 1988 Hazard Class**

B3 Combustible liquid
E Corrosive material

**Components**

| Acetic Acid, glacial |

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

**Components**

| Acetic Acid, glacial |

<table>
<thead>
<tr>
<th>Components</th>
<th>WHIMIS Ingredient Disclosure List -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>1 %</td>
</tr>
</tbody>
</table>

**Inventory**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>Present</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

**Components**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CEPA Schedule I - Toxic Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Product code:** A1010  
**Product name:** ACETIC ACID, GLACIAL, REAGENT, ACS
## EU Classification

### EU GHS - SV - CLP 1272/2008

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>EU GHS - SV - CLP (1272/2008)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>Flammable liquids - Flam. Liq. 3: H226</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flammable liquid and vapour.: Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (C &gt;= 90 %)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>607-002-00-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (C &gt;= 90 %); Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (25 % &lt;= C &lt;90 %); Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation. (10 % &lt;= C &lt;25 %); Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation. (10 % &lt;= C &lt;25 %) 607-002-00-6</td>
</tr>
</tbody>
</table>

### EU - CLP (1272/2008)

**R-phrase(s)**
- R35 - Causes severe burns.
- R10 - Flammable.

**S-phrase(s)**
- S23 - Do not breathe gas/fumes/vapor/spray.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S 1/2 - Keep locked up and out of the reach of children.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid, glacial</td>
<td>64-19-7</td>
<td>R10 C; R35</td>
<td>10%&lt;=C&lt;25% Xi; R36/38 90%&lt;=C C; R35 25%&lt;=C&lt;90% C; R34</td>
<td>S: (1/2)-23-26-45</td>
</tr>
</tbody>
</table>

The product is classified in accordance with Annex VI to Directive 67/548/EEC

### Indication of danger:
- C - Corrosive.
- Flammable

### 16. OTHER INFORMATION

**Preparation Date:** 5/27/2014

**Product code:** A1010 **Product name:** ACETIC ACID, GLACIAL, REAGENT, ACS
Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet