SAFETY DATA SHEET

ACETIC ACID, GLACIAL

Section 1 - Chemical Product and Company Identification

SDS Name: Acetic Acid, Glacial
Catalog Numbers: SO-618, SO-788
Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.
10 ELECTRONICS AVENUE
DANVERS, MA 01923
For information, call: 978-739-4883
Emergency Number: 800-424-9300
For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications

H226-Flammable liquids: 3
H290-Corrosive to metals: 1
H303-Acute toxicity, oral: 5
H314-Skin corrosion/irritation: 1A
H318-Serious eye damage/eye irritation: 1
H332-Acute toxicity, inhalation: 4
H402-Hazardous to the aquatic environment, acute toxicity: 3

Pictograms or Hazard symbols and Hazard statement(s):

Signal Word: Danger

Hazard Statements:

H226-Flammable liquid and vapour
H290-May be corrosive to metals
H303-May be harmful if swallowed
H314-Causes severe skin burns and eye damage
H318-Causes serious eye damage
H332-Harmful if inhaled
H402-Harmful to aquatic life

Precautionary Statements:

P210-Keep away from heat/sparks/open flames/hot surfaces.-No smoking.
P233-Keep container tightly closed.
P234-Keep only in original container.
P240-Ground/Bond container and receiving equipment.
P241-Use explosion-proof electrical/ventilating/lighting/equipment.
P242-Use only non-sparking tools.
P243-Take precautionary measures against static discharge.
P260-Do not breathe dusts or mists.
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.
P264-Wash thoroughly after handling.
P271-Use only outdoors or in a well-ventilated area.
P273-Avoid release to the environment.
P280-Wear protective gloves/protective clothing/eye protection/face protection.
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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340-If inhaled: Remove victim to fresh air and keep at rest in a position 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.
P310-Immediately call a Poison Center or doctor/physician.
P312-Call a Poison Center or doctor/physician if you feel unwell.
P363-Wash contaminated clothing before reuse.
P370+P378-In case of fire: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam for extinction.
P390-Absorb spillage to prevent material damage.
P403+P235-Store in a well-ventilated place. Keep cool.
P405-Store locked up.
P406-Store in corrosive resistant/container with a resistant inner liner.
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
64-19-7	Glacial Acetic Acid	99-100

Section 4 - First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Seek immediate medical attention.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek medical attention.

Oral Exposure: If swallowed, seek immediate medical advice. Do NOT induce vomiting. Rinse mouth with water.

Inhalation Exposure: If inhaled, remove to fresh air. Seek immediate medical attention.

Section 5 - Fire Fighting Measures

General Information: Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Note: Glacial acetic acid causes burns of eyes, skin, and mucous membranes.

Extinguishing Media: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

Hazardous Combustion Products: Carbon oxides, irritating toxic fumes and gases.

Flash Point: 40 °C
Autoignition temperature: 427°C
Explosion Limits, Lower: 4.0 vol %
Upper: 19.9 vol %
NFPA Rating: (estimated) Health: 3; Flammability: 2; Instability: 0

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):
Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Keep away from heat. Eliminate all sources of ignition.

Methods for Cleaning up: Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Do not release to the environment. Do not release to drains.

Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Ensure adequate ventilation. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Store in a tightly closed container in a dry, cool, and well-ventilated place. Use only non-sparking tools and equipment. Keep away from incompatible materials. Keep away from sources of ignition. Protect from heat, sparks, and flame. Vapors heavier than air may travel considerable distance and ignite or explode.

Note: Acetic acid is extremely destructive to all body tissue. In concentrated form (glacial acetic acid), it is corrosive and flammable. Inhalation of concentrated vapors may cause serious damage to the lining of the nose, throat, and lungs. Breathing difficulties may occur. Ingestion of concentrated acetic acid causes severe swelling, severe damage to the tissue and danger or perforation. Contact with concentrated acetic acid may cause serious damage to the skin. Eye contact with concentrated acetic acid may cause severe eye damage followed by loss of sight. Exposure to vapor may cause intense watering and irritation to eyes.

Note: Static discharge could act as an ignition source.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Glacial Acetic Acid CAS#64-19-7	10 ppm TWA 15 ppm STEL	10 ppm TWA 25 mg/m3 TWA 15 ppm STEL 37 mg/m3 STEL 50 ppm IDLH	10 ppm TWA 25 mg/m3 TWA

OSHA Vacated PELs: Glacial Acetic Acid: 10 ppm TWA; 25 mg/m3 TWA

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: Clear, colorless
Odor: Strong, vinegar-like
Vapor Pressure: 1.52 kPa at 20°C
Odor Threshold: 0.2 ppm
Vapor Density: 2.10
pH: <2.5 at 10g/L aqueous solution
Relative density: 1.049 g/cm3 at 25°C
Melting point/freezing point: 16.2°C
Solubility: Soluble in water
Boiling Point: 117-118°C
Flash point: 40°C
Evaporation Rate: 0.97 (BuAC=1.0)
Flammability (solid, gas): Not applicable
Partition coefficient: n-octanol/water: log Pow: -0.17 at 25°C
Auto-ignition temperature: 427°C
Decomposition temperature: Not available
Viscosity: 1.53 mPa.s at 25°C
Specific Gravity/Density: 1.048

NOTE: Static discharge could act as an ignition source.

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, excess heat, hot surfaces, ignition sources, and freezing. Exposure to air or moisture over prolonged periods.
Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, metals, acids, chromic acid, ethylene glycol, perchloric acid, nitric acid, phosphorous trichloride, oxidizers, sodium peroxide, strong caustics, carbonates, hydroxides, oxides, and phosphates.
Hazardous Decomposition Products: Carbon oxides, irritating and toxic fumes and gases.

Section 11 - Toxicological Information

CAS#64-19-7 Glacial Acetic Acid: RTECS#: AF1225000
LD50 Oral: 3310 mg/kg (rat)
LD50 Dermal: 1060 mg/kg (rabbit)
LC50 Inhalation: 11.4 mg/L (rat) 4h
Investigated as a mutagen, reproductive effecter.

Skin corrosion/irritation: skin (rabbit), causes severe burns
Serious eye damage/eye irritation: eyes (rabbit), corrosive to eyes, causes serious eye damage

Carcinogenicity: Glacial Acetic Acid CAS#64-19-7 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

Note: Acetic acid is extremely destructive to all body tissue. In concentrated form (glacial acetic acid), it is corrosive and flammable. Inhalation of concentrated vapors may cause serious damage to the lining of the nose, throat, and lungs. Breathing difficulties may occur. Ingestion of concentrated acetic acid causes severe swelling, severe damage to the tissue and danger or perforation. Contact with concentrated acetic acid may cause serious damage to the skin. Eye contact with concentrated acetic acid may cause severe eye damage followed by loss of sight. Exposure to vapor may cause intense watering and irritation to eyes.

Epidemiology: Not available
Teratogenicity: Not available
Reproductive Effects: Not available
Developmental Effects: Not available
Neurotoxicity: Not available
Mutagenicity: Not mutagenic in AMES test
Specific Target Organ Toxicity, Single Exposure: Not available
Specific Target Organ Toxicity, Repeated Exposure: Not available

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains. Harmful to aquatic life. Harmful effect due to pH shift. Caustic even in diluted form.

CAS#64-19-7 Glacial Acetic Acid:
LC50, freshwater fish: 88 mg/L 96h (pimephales promelas)
LC50, freshwater fish: 75 mg/L 96h (lepomis macrochirus)
EC50, water flea: 95 mg/L 24h
EC50, microtox: 8.8 mg/L 5min (photobacterium phosphoreum)

Persistence and degradability: If released to water, Glacial Acetic Acid is expected to biodegrade. If released to soil, it is expected to biodegrade.
Bio-accumulative potential: Bioaccumulation is not expected.
Mobility: Will likely be mobile in the environment due to its water solubility.

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 – Transport Information

DOT
Proper Shipping Name: Acetic Acid, Glacial
UN2789
PG II
Hazard class 8, 3

Section 15 - Regulatory Information

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR

Section 16 - Additional Information

SDS Creation Date: 10/15/12
Revision #1. RC 8/20/13
Revision #2. change section 13 statement RC 6/8/15
Revision #3. 3-26-19
Revision #4. 7-5-22

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