

# SAFETY DATA SHEET

## 1 PRODUCT AND COMPANY IDENTIFICATION

**Product name:** Acetic Acid, Glacial

**Product No.:** 9508-00, 9508-02, 9508-05, 9508-07, 9508-15, 9508-33, 9508-01, 9508-03, 9508-06, 9508-08, 9508-18, 9508-69

**Manufacturer:**

Avantor Performance Materials, Inc.  
3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034  
U.S.A.

**Telephone:**

Customer Service: 855-282-6867

**Contact Person:** Environmental Health & Safety

**e-mail:** info@avantormaterials.com

**Emergency telephone:**

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

## 2 HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:**

**Color:**

Colorless

**Form :**

Liquid (Note: Solid below 62°F)

**Odor:**

Strong. Vinegar-like odor.

**Signal words**

DANGER!

**Potential Health Effects:**

**General**

Corrosive. Causes severe skin and eye burns. Causes digestive tract burns. Mist or vapor extremely irritating to eyes and respiratory tract.

**Potential Physical / Chemical Effects:**

Flammable liquid and vapor.

**Inhalation:**

May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

**Skin:**

Causes severe skin burns.

**Eye:**

Causes severe eye burns. Vapor or spray may cause eye damage, impaired sight or blindness.

**Ingestion:**

May cause burns of the gastrointestinal tract if swallowed.

**Chronic Effects:**

Corrosive. Prolonged contact causes serious tissue damage.

**Routes of Exposure:**

Skin and/or eye contact., Inhalation, Ingestion

**Target Organs:**

Lungs

**OSHA Regulatory Status**

This product is hazardous according to OSHA 29CFR 1910.1200.

**Environment:**

Harmful to aquatic organisms. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

### 3 COMPOSITION / INFORMATION ON INGREDIENTS

**General information:**

**Hazardous Component(s):**

Chemical name	CAS-No.	Concentration
ACETIC ACID	64-19-7	99 - 100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4 FIRST AID MEASURES

- General:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- Inhalation:** Move to fresh air. Call a physician or poison control center immediately. Apply artificial respiration if victim is not breathing. If breathing is difficult, give oxygen.
- Skin contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately.
- Ingestion:** Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
- Notes to the physician:**  
**Treatment:** Symptoms may be delayed.

### 5 FIRE-FIGHTING MEASURES

- Extinguishing media:** Water spray, foam, dry powder or carbon dioxide.
- Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.
- Unusual Fire & Explosion Hazards:** Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.
- Special Fire Fighting Procedures:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.
- Protective Measures:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

## 6 ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Keep unauthorized personnel away. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate area.
- Environmental precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
- Spill Cleanup Methods:** Eliminate all ignition sources if safe to do so. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
- Notification Procedures:** Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

## 7 HANDLING AND STORAGE

- Handling:** DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Wear appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Ground/bond container and receiving equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using the product. Use caution when adding this material to water. See Section 8 of the MSDS for Personal Protective Equipment.
- Storage:** Keep away from food, drink and animal feedingstuffs. Do not store in metal containers. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids. Keep container tightly closed. Store in cool, dry place. Store in a well-ventilated place.

## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure limits

Chemical name	Type	Exposure Limit values	Source
ACETIC ACID	TWA	10 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	15 ppm	US. ACGIH Threshold Limit Values (2011)
ACETIC ACID	PEL	10 ppm      25 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	10 ppm      25 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

- Protective Measures:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye

wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

- Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.
- Eye protection:** Wear safety glasses with side shields (or goggles) and a face shield.
- Skin and Body Protection:** Wear suitable protective clothing and gloves.
- Hygiene measures:** Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

<b>Physical State:</b>	Liquid
<b>Form:</b>	Liquid (Note: Solid below 62°F)
<b>Color:</b>	Colorless
<b>Odor:</b>	Strong., Vinegar-like odor.
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	2.4 (1.0 M aqueous solution)
<b>Freezing point:</b>	16.6 °C
<b>Boiling Point:</b>	117.9 °C
<b>Flash Point:</b>	103 °F (Closed Cup)
<b>Evaporation Rate:</b>	0.97 (butyl acetate=1)
<b>Flammability (solid, gas):</b>	Class II Combustible Liquid
<b>Flammability Limit - Upper (%)-:</b>	No data available.
<b>Flammability Limit - Lower (%)-:</b>	No data available.
<b>Vapor pressure:</b>	2.093 kPa (25 °C)
<b>Vapor density (air=1):</b>	2.1 AIR=1
<b>Relative density:</b>	1.0446
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	Miscible with water.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	-0.17
<b>Autoignition Temperature:</b>	426 °C
<b>Decomposition Temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Explosive properties:</b>	No data available.
<b>Oxidizing properties:</b>	No data available.

## 10 STABILITY AND REACTIVITY

<b>Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Heat, sparks, flames. Moisture.
<b>Incompatible materials:</b>	Strong oxidizing agents. Peroxides. Caustics. Metals.
<b>Hazardous decomposition products:</b>	Thermal decomposition may release oxides of carbon.

## 11 TOXICOLOGICAL INFORMATION

<b>Product:</b>	
<b>Acute Toxicity (Oral):</b>	LD 50 (Rat): 3,310 mg/kg
<b>Acute Toxicity (Dermal):</b>	LD 50 (Rabbit): 1,060 mg/kg
<b>Acute Toxicity (Inhalation):</b>	LC 50 (Rat, 4 h): 11.4 mg/l
<b>Inhalation:</b>	Harmful if inhaled.
<b>Ingestion:</b>	May be harmful if swallowed.
<b>Skin corrosion/irritation:</b>	Harmful in contact with skin. Causes severe skin burns.
<b>Serious eye damage/eye irritation:</b>	Causes serious eye damage.
<b>Respiratory sensitizer/Skin sensitizer:</b>	Not a skin sensitizer.
<b>Carcinogenicity:</b>	This substance has no evidence of carcinogenic properties.
<b>Mutagenesis:</b>	No mutagenic components identified
<b>Reproductive toxicity:</b>	No components toxic to reproduction
<b>Other Effects:</b>	None known.

## 12 ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	Harmful to aquatic organisms. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.
<b>Product:</b>	
<b>Acute toxicity(Fish):</b>	LC 50 (Bluegill (Lepomis macrochirus), 96 h): 75 mg/l
<b>Chronic Toxicity(Fish):</b>	No data available.
<b>Acute toxicity(Aquatic invertebrates):</b>	EC 50 (Water flea (Daphnia magna), 48 h): 65 mg/l
<b>Chronic Toxicity(Aquatic invertebrates):</b>	No data available.

**Acute toxicity(Aquatic plants):** No data available.

**Persistence and degradability:** Expected to be readily biodegradable.

**Bioaccumulative potential:** No data available on bioaccumulation.

**Mobility:** The product is water soluble and may spread in water systems.

### 13 DISPOSAL CONSIDERATIONS

**Disposal Methods:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14 TRANSPORT INFORMATION

#### DOT

UN number: UN 2789  
Proper Shipping Name: Acetic acid, glacial  
Transport hazard class(es): 8  
Subsidiary risk label: –  
Packing group: II  
Label(s): 8, 3

Marine Pollutant

#### IMDG - International Maritime Dangerous Goods Code

UN number: UN 2789  
UN proper shipping name: ACETIC ACID, GLACIAL  
Transport hazard class(es): 8  
Subsidiary risk label: –  
Packing group: II  
Label(s): 8, 3  
Marine Pollutant:  
EmS No.: F-E; S-C

#### IATA

UN number: UN 2789  
Proper Shipping Name: Acetic acid, glacial  
Transport hazard class(es): 8  
Subsidiary risk label: –  
Packing group: II  
Label(s): 8, 3

### 15 REGULATORY INFORMATION

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EU EINECS List:	On or in compliance with the inventory
EU ELINCS List:	Not in compliance with the inventory.
Japan (ENCS) List:	On or in compliance with the inventory
EU No Longer Polymers List:	Not in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Switzerland Consolidated Inventory:	Not in compliance with the inventory.
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

**US Regulations**

• **CERCLA Hazardous Substance List (40 CFR 302.4):**

• **Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):**

ACETIC ACID Reportable quantity: 5000 lbs.

• **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None

**SARA Title III**

• **Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):**

None

None

• **Section 311/312 (40 CFR 370):**

Acute (Immediate)  Chronic (Delayed)  Fire  Reactive  Pressure Generating

• **Section 313 Toxic Release Inventory (40 CFR 372):**

None present or none present in regulated quantities.

**State Regulations**

• **California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):**

No ingredient regulated by CA Prop 65 present.

• **Massachusetts Right-To-Know List:**

ACETIC ACID Listed

• **New Jersey Right-To-Know List:**

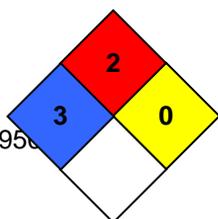
ACETIC ACID Listed

• **Pennsylvania Right-To-Know List:**

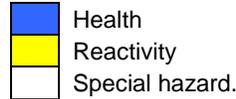
ACETIC ACID Listed

**16 OTHER INFORMATION**

**NFPA Hazard ID**



 Flammability



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

**Revision Information:**

**Issue Date:** 04-08-2013

**SDS No:**

**Disclaimer:**

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