

# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Acetic Acid, Glacial  
**Other means of identification**  
**CAS number** 64-19-7  
**Recommended use** General purpose solvent.  
**Recommended restrictions** Use in accordance with manufacturer's recommendations.

### Manufacturer/Importer/Supplier/Distributor information

**Company Name** Greenfield Global USA Inc.  
**Address** 1101 Isaac Shelby Drive  
Shelbyville, KY 40065  
USA  
**Telephone** 502.232.7600  
**Fax** 502.633.6100

**Company Name** Greenfield Global USA Inc.  
**Address** 58 Vale Road  
Brookfield, CT 06804  
USA  
**Telephone** 203.740.3471  
**Fax** 203.740.3481

**Emergency phone number**  
**USA** CHEMTREC: 1.800.424.9300 (CCN 17213)  
**International** CHEMTREC: +1.703.527.3887 (CCN 17213)

## 2. Hazard(s) identification

**Physical hazards** Flammable liquids Category 3  
**Health hazards** Acute toxicity, dermal Category 4  
Acute toxicity, inhalation Category 4  
Skin corrosion/irritation Category 1A  
Serious eye damage/eye irritation Category 1  
**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 3  
**OSHA defined hazards** Not classified.  
**Label elements**



**Signal word** Danger  
**Hazard statement** Flammable liquid and vapor. Harmful in contact with skin. Causes severe skin burns and eye damage. Harmful if inhaled. Harmful to aquatic life.

## Precautionary statement

### Prevention

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. Do not breathe mist/vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

### Response

If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of fire: Use appropriate media to extinguish.

### Storage

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

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Hazard(s) not otherwise classified (HNOC)

None known.

### Supplemental information

None.

## 3. Composition/information on ingredients

### Substances

Chemical name	Common name and synonyms	CAS number	%
Acetic acid		64-19-7	100

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

## 4. First-aid measures

### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a poison center or doctor/physician if you feel unwell.

### Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

### Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

### Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

### Most important symptoms/effects, acute and delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

### General information

Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

### Suitable extinguishing media

Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

### Specific hazards arising from the chemical

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

### Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

### General fire hazards

Flammable liquid and vapor.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

### Methods and materials for containment and cleaning up

Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This product is miscible in water. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

### Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value
Acetic acid (CAS 64-19-7)	PEL	25 mg/m <sup>3</sup>
		10 ppm

#### US. ACGIH Threshold Limit Values

Material	Type	Value
Acetic acid (CAS 64-19-7)	STEL	15 ppm
	TWA	10 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Acetic acid (CAS 64-19-7)	STEL	37 mg/m <sup>3</sup>
		15 ppm
	TWA	25 mg/m <sup>3</sup>
		10 ppm

### Biological limit values

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Explosion-proof general and local exhaust ventilation. Good general ventilation 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. Eye wash facilities and emergency shower must be available when handling this product.

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

**Eye/face protection** Wear chemical goggles and face shield.

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves. Nitrile, butyl rubber or neoprene gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

**Skin protection**

**Other** Wear appropriate chemical resistant clothing.

**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.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

**Physical state** Liquid.

**Form** Clear liquid.

**Color** Colorless.

**Odor** Not available.

**Odor threshold** Not available.

**Melting point/freezing point** 60.8 °F (16 °C)

**Initial boiling point and boiling range** 244.2 °F (117.9 °C)

**Flash point** 103.0 °F (39.4 °C) Closed Cup

**Evaporation rate** Not available.

**Flammability (solid, gas)** Flammable.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** 19.9 % v/v

**Flammability limit - upper (%)** 4 % v/v

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** 11.4 mmHg (68 °F (20 °C))

**Vapor density** 2.1

**Relative density** 1.049 g/ml (77 °F (25 °C))

### Solubility(ies)

**Solubility (water)** Soluble in water

**Auto-ignition temperature** 865.4 °F (463 °C)

**Decomposition temperature** Not available.

**Viscosity** Not available.

### Other information

**Explosive properties** Not explosive.

**Molecular formula** C2-H4-O2

**Molecular weight** 60.05 g/mol

**Oxidizing properties** Not oxidizing.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Harmful if inhaled.
<b>Skin contact</b>	Causes severe skin burns. Harmful in contact with skin.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Causes digestive tract burns.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
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### Information on toxicological effects

<b>Acute toxicity</b>	Harmful if inhaled. Harmful in contact with skin.
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	Not listed.
<b>NTP Report on Carcinogens</b>	Not listed.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b>	Not listed.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

<b>Ecotoxicity</b>	Harmful to aquatic life.
<b>Persistence and degradability</b>	No data is available on the degradability of this substance.
<b>Bioaccumulative potential</b>	
<b>Mobility in soil</b>	Expected to be mobile in soil.
<b>Other adverse effects</b>	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	D001: Waste Flammable material with a flash point <140 F D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel] The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

<b>DOT</b>	
<b>UN number</b>	UN2789
<b>UN proper shipping name</b>	Acetic acid, glacial
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	3
<b>Label(s)</b>	8, 3
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	A3, A6, A7, A10, B2, IB2, T7, TP2
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	243
<b>IATA</b>	
<b>UN number</b>	UN2789
<b>UN proper shipping name</b>	Acetic acid, glacial
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	No
<b>ERG Code</b>	8F
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>IMDG</b>	
<b>UN number</b>	UN2789
<b>UN proper shipping name</b>	ACETIC ACID, GLACIAL
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	3
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No
<b>EmS</b>	F-E, S-C
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	This product is a liquid and when transported in bulk is covered under MARPOL 73/78 Annex II. This product is listed in the IBC Code. Ship type: 3 Pollution category: Z

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

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

Acetic acid (CAS 64-19-7) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Toxic Substances Control Act (TSCA)** This substance is on the TSCA 8(b) inventory and is designated "active".

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**Classified hazard categories** Flammable (gases, aerosols, liquids, or solids)  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

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

Not regulated.

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance

**Safe Drinking Water Act (SDWA)** Not regulated.

**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Acetic acid (CAS 64-19-7) High priority

**Food and Drug Administration (FDA)** Total food additive  
Direct food additive  
GRAS food additive

**US state regulations**

**US. Massachusetts RTK - Substance List**

Acetic acid (CAS 64-19-7)

**US. New Jersey Worker and Community Right-to-Know Act**

Acetic acid (CAS 64-19-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Acetic acid (CAS 64-19-7)

**US. Rhode Island RTK**

Acetic acid (CAS 64-19-7)

**California Proposition 65**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 19-June-2019

**Revision date** -

**Version #** 01

**HMIS® ratings**  
 Health: 3  
 Flammability: 3  
 Physical hazard: 0

**Disclaimer** This product is subject to Greenfield Global USA Inc.'s terms and conditions, which can be found at <http://www.greenfield.com/tc-po-us/>. Greenfield cannot anticipate all conditions under which this information and this product, or the products of other manufacturers in combination with this product, may be used. The user is responsible for the proper and safe use, handling, storage and disposal of the product, and assumes liability for any loss, injury, damage or expense arising from any failure to do so. The data in this sheet is based on information and experience available at the time of writing.