

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name: Eastman (TM) Glacial Acetic Acid, Low Metals

Product No.: P3386100

Additional identification

Chemical name: acetic acid
CAS-No.: 64-19-7

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Solvent

Uses advised against: None known.

Details of the supplier of the safety data sheet

Manufacturer / Supplier

Eastman Chemical Company
200 South Wilcox Drive
Kingsport, TN 37660-5280 US
+14232292000

Visit our website at www.EASTMAN.com or email emnmsds@eastman.com

Emergency telephone number:

For emergency health, safety, and environmental information, call 1-423-229-4511 or 1-423-229-2000.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300 or call 423-229-2000.

SECTION 2: Hazards identification

Hazard classification:

Physical hazards

Flammable liquids Category 3

Health hazards

Skin corrosion/irritation Category 1A

Serious eye damage/eye irritation Category 1

Specific target organ toxicity - single exposure Category 3

OSHA Specified Hazards: not applicable

Warning label items including precautionary statement:

Pictogram:



Signal words: DANGER!

Hazard Statement(s): H226: Flammable liquid and vapor.
H314: Causes severe skin burns and eye damage.
H335: May cause respiratory irritation.

Precautionary statement:

Prevention: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
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.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P264: Wash hands thoroughly after handling.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P271: Use only outdoors or in a well-ventilated area.

Response: P370+P378: In case of fire; Use water spray, carbon dioxide, dry chemical or alcohol foam for extinction.
P303+P361+P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P363: Wash contaminated clothing before reuse.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
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.

Storage: P403+P235: Store in a well-ventilated place. Keep cool.
P233: Keep container tightly closed.
P405: Store locked up.

Disposal: P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None known.

SECTION 3: Composition/information on ingredients

Substances / Mixtures

General information:

Chemical name	Concentration	Additional identification	Notes
acetic acid	100%	CAS-No.: 64-19-7	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
 This substance has workplace exposure limit(s).

SECTION 4: First aid measures

Description of first aid measures

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

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 if symptoms persist.

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.

Ingestion: Call a physician or poison control center immediately. Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration.

Most important symptoms and effects, both acute and delayed: May irritate and cause redness and pain.

Indication of any immediate medical attention and special treatment needed

Hazards: None known.

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards: Combustible liquid and vapor.

Extinguishing media

Suitable extinguishing media: Water spray. Dry chemical. Carbon Dioxide. Alcohol foam.

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture: 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.

Advice for firefighters

Special fire fighting procedures: Water may be ineffective in fighting the fire. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment.

Environmental precautions: Avoid release to the environment.

Methods and material for containment and cleaning up: Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Large Spillages: Use water spray to disperse vapors and flush spill area. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

SECTION 7: Handling and storage:

Precautions for safe handling: Avoid breathing mists or vapors. Do not get in eyes, on skin, on clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed and in a well-ventilated place.

Specific end use(s): Solvent

SECTION 8: Exposure controls/personal protection

Control parameters
Occupational exposure limits

Country specific exposure limits have not been established or are not applicable unless listed below.

Chemical name	Type	Exposure Limit values	Source
acetic acid	TWA	10 ppm	US. ACGIH Threshold Limit Values (01 2010)
	STEL	15 ppm	US. ACGIH Threshold Limit Values (01 2010)
	PEL	10 ppm 25 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Exposure controls

Appropriate engineering controls: 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.

Individual protection measures, such as personal protective equipment

General information: Eye bath. Washing facilities. Safety shower.

Eye/face protection: Use safety goggles and face shield in case of splash risk. Wear a full-face respirator, if needed.

Skin protection

Hand protection: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Other: No data available.

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. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: 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.

Hygiene measures: Observe good industrial hygiene practices.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical State:	Liquid
Form:	Liquid
Color:	colorless
Odor:	Pungent
Odor Threshold:	0.48 ppm
pH:	2.4 (60 g/l,)
Freezing Point:	16.64 °C
Boiling Point:	117.9 °C
Flash Point:	39 °C (Tagliabue Closed Cup)
Evaporation Rate:	Not determined.
Flammability (solid, gas):	Flammable.
Flammability Limit - Upper (%)-:	19.9 %(V)
Flammability Limit - Lower (%)-:	4 %(V)

Vapor pressure:	20.79 hPa (25 °C)
Vapor density (air=1):	2.1
Specific Gravity:	1.0446 (25 °C)
Solubility(ies)	
Solubility in Water:	602.9 g/l (25 °C)
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	log Pow: -0.17
Autoignition Temperature:	463 °C
Decomposition Temperature:	No data available.
Dynamic Viscosity:	1.056 mPa.s (25 °C)
Kinematic viscosity:	1.011 mm ² /s
Explosive properties:	Not classified
Oxidizing properties:	Not classified

SECTION 10: Stability and reactivity

Reactivity:	None known.
Chemical stability:	Stable
Possibility of hazardous reactions:	None known.
Conditions to avoid:	Heat, sparks, flames.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon Dioxide. Carbon Monoxide.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	Mist or vapor irritating.
Ingestion:	May cause burns of the gastrointestinal tract if swallowed.
Skin contact:	Causes severe skin burns.
Eye contact:	Causes severe eye burns.

Information on toxicological effects

Acute Toxicity

Oral	
Product:	No data available.
Specified substance(s)	
acetic acid	Oral LD-50: (Rat): 3,530 mg/kg

Dermal	
Product:	No data available.

Specified substance(s)

acetic acid

Dermal LD-50: (Rabbit): 1,060 mg/kg

Inhalation

Product:

No data available.

Specified substance(s)

acetic acid

LC50 (Rat,): > 40 mg/l
LC50 (Mouse, 1 h): 5250 ppm
LC50 (Rat, 4 h): > 16000 ppm

Repeated dose toxicity

Product:

No data available.

Specified substance(s)

acetic acid

No data available.

Skin corrosion/irritation:

Product:

No data available.

Specified substance(s)

acetic acid

(Rabbit, 24 h): Severe

Serious eye damage/eye irritation:

Product:

No data available.

Specified substance(s)

acetic acid

(Rabbit): Severe

Respiratory or skin sensitization:

Product:

No data available.

Specified substance(s)

acetic acid

No data available.

Mutagenicity

In vitro

Product:

No data available.

Specified substance(s)

acetic acid

Mutagenicity - Bacterial, : negative +/- activation
Chromosomal aberration, : negative +/- activation
Mutagenicity - Mammalian, : negative +/- activation

In vivo

Product:

No data available.

Specified substance(s)

acetic acid

No data available.

Carcinogenicity

Product:

No data available.

Specified substance(s)

acetic acid

No data available.

Reproductive toxicity

Product: No data available.

Specified substance(s)
 acetic acid No data available.

Specific target organ toxicity - single exposure

Product: No data available.

Specified substance(s)
 acetic acid No data available.

Specific target organ toxicity - repeated exposure

Product: No data available.

Specified substance(s)
 acetic acid No data available.

Aspiration hazard

Product: No data available.

Specified substance(s)
 acetic acid No data available.

Other adverse effects: No data available.

SECTION 12: Ecological information

Toxicity

Acute toxicity

Fish

Product: No data available.

Specified substance(s)
 acetic acid LC-50 (Fathead Minnow, 96 h): > 100 mg/l Read-across from a similar material
 LC-50 (golden orfe, 48 h): 410 mg/l

Aquatic invertebrates

Product: No data available.

Specified substance(s)
 acetic acid EC-50 (daphnid, 48 h): > 300.82 mg/l Read-across from a similar material
 LC-50 (daphnid, 96 h): > 100 mg/l

Chronic Toxicity

Fish

Product: No data available.

Specified substance(s)
 acetic acid No data available.

Aquatic invertebrates

Product: No data available.

Specified substance(s)
 acetic acid No data available.

Toxicity to Aquatic Plants

Product: No data available.
Specified substance(s)
 acetic acid EC-50 > 300.82 mg/l Read-across from a similar material

Persistence and degradability

Biodegradation

Product: No data available.
Specified substance(s)
 acetic acid 96 % (20 d) Readily biodegradable Read-across from a similar material

Biological Oxygen Demand:

Product No data available.
Specified substance(s)
 acetic acid BOD-5: 340 - 880 mg/g
 BOD-20: 900 mg/g

Chemical Oxygen Demand:

Product No data available.
Specified substance(s)
 acetic acid 1,030 mg/g

BOD/COD ratio

Product No data available.
Specified substance(s)
 acetic acid No data available.

Bioaccumulative potential

Product: No data available.
Specified substance(s)
 acetic acid No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

acetic acid 0.062 (QSAR model)

Results of PBT and vPvB assessment: No data available.

acetic acid Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Waste treatment methods

General information: No data available.

Disposal methods: Dispose of waste and residues in accordance with local authority requirements. Mix with compatible chemical which is less flammable and incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

SECTION 14: Transport information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT

Reportable Quantity: 2,270 kg (acetic acid)
Possible Shipping Description(s):

UN 2789 Acetic acid, glacial 8 (3) II

IMDG - International Maritime Dangerous Goods Code

Possible Shipping Description(s):

UN 2789 ACETIC ACID, GLACIAL 8 (3) II

IATA

Possible Shipping Description(s):

UN 2789 Acetic acid, glacial 8 (3) II

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: B/3, E

SARA 311-312 Hazard Classification(s):

immediate (acute) health hazard

fire hazard

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List

NONE

OSHA: hazardous

TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL. Any impurities present in this product are exempt from listing.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.

Philippines Inventory (PICCS) : This product is listed on the Philippine Inventory or otherwise complies with PICCS.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

SECTION 16: Other information

HMIS® Hazard Ratings: Health - 3, Flammability - 2, Chemical Reactivity - 0

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Revision Information: Not relevant.

Key literature references and sources for data: No data available.

Training information: No data available.

Issue date: 12/16/2013

SDS No.:

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.