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#### Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

performance through chemistry

Revision date: 09/28/2020

Supersedes: 09/06/2016

Version: 1.4

SECTION 1: Identification			
1.1. Identification			
Product form	: Substance		
Substance name	: Acetic Acid		
CAS-No.	: 64-19-7		
Product code	: LC10100		
Formula	: C2H4O2		
Synonyms	: Acetic acid, glacial / alcohol of vinegar / carboxylic acid C2 / ethanoic acid / ethylic acid / methanecarboxylic acid / pyroligneous acid / vinegar acid		
1.2. Recommended use and restriction	is on use		
Use of the substance/mixture	: Chemical intermediate Solvent Food industry: additive Laboratory chemical Photographic chemical		
Recommended use	: Laboratory chemicals		
Restrictions on use	: Not for food, drug or household use		
1.3. Supplier			
LabChem, Inc.			
1010 Jackson's Pointe Ct.			
Zelienople, PA 16063 - USA			
T 412-826-5230 - F 724-473-0647			
info@labchem.com - www.labchem.com			
1.4. Emergency telephone number			

Emergency number

: CHEMTREC: 1-800-424-9300 or +1-703-741-5970

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#### SECTION 2: Hazard(s) identification

Classification of the substance or mixture 2.1.

#### **GHS US classification**

Flammable liquids Category 3 Acute toxicity (inhalation:vapor) Category 4 Skin corrosion/irritation Category 1B Serious eye damage/eye irritation Category 1 Hazardous to the aquatic environment - Acute Hazard Category 3

- H226 Flammable liquid and vapor
- H332 Harmful if inhaled
- H314 Causes severe skin burns and eye damage
- H318 Causes serious eye damage
- H402 Harmful to aquatic life

Full text of H statements : see section 16

#### GHS Label elements, including precautionary statements 2.2.

### **GHS US labeling**

Hazard pictograms (GHS US)

Signal word (GHS US)	: Danger
Hazard statements (GHS US)	: H226 - Flammable liquid and vapor H314 - Causes severe skin burns and eye damage H332 - Harmful if inhaled H402 - Harmful to aquatic life
Precautionary statements (GHS US)	<ul> <li>P210 - Keep away from heat, sparks, open flames, hot surfaces No smoking.</li> <li>P233 - Keep container tightly closed.</li> <li>P240 - Ground/bond container and receiving equipment.</li> <li>P241 - Use explosion-proof electrical, ventilating, lighting equipment.</li> <li>P242 - Use only non-sparking tools.</li> <li>P243 - Take precautionary measures against static discharge.</li> </ul>

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	P264 P271 P273 P280 P301+ P303+ clothir P305+ Contac P310 P363 P370+ exting P403+ P405	Use only outdoors Avoid release to the Wear protective clu P330+P331 - IF SV P361+P353 - IF ON g. Rinse skin with v P340 - IF INHALEE P351+P338 - IF IN the lenses, if present Immediately call a Wash contaminate P378 - In case of fi- uish P235 - Store in a w Store locked up.	in thoroughly after hand or in a well-ventilated ne environment. othing, protective glove VALLOWED: Rinse mo N SKIN (or hair): Remo vater/shower.	area. es, eye protection, fa buth. Do NOT induce ove/Take off immedia resh air and keep cou- ly with water for sev- oue rinsing. or/physician. e. e (CO2), powder, alc eep cool.	e vomiting. htely all contaminated mfortable for breathing. eral minutes. Remove ohol-resistant foam to
2.3. Other hazards which do not resu	It in classific	ation			
Other hazards not contributing to the classification 2.4. Unknown acute toxicity (GHS US	: None.				
Not applicable					
<b>SECTION 3: Composition/Informa</b>	tion on ing	gredients			
3.1. Substances					
Substance type	: Mono-	constituent			
Name			Product identifier	%	GHS US classification
Acetic Acid (Main constituent)			(CAS-No.) 64-19-7	100	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Full text of hazard classes and H-statements	: see section	16			
3.2. Mixtures					
Not applicable					
SECTION 4: First-aid measures					
4.1. Description of first aid measures					
First-aid measures general	arrest: with la Vomiti warmi	artificial respiration bored breathing: hang: prevent asphyxing ng up). Keep watch	n or oxygen. Cardiac ar alf-seated. Victim in sho ia/aspiration pneumoni	rest: perform resusc ock: on his back with a. Prevent cooling b ychological aid. Keep	nd respiration. Respiratory itation. Victim conscious legs slightly raised. y covering the victim (no o the victim calm, avoid
First-aid measures after inhalation	admin	Remove the victim into fresh air. Immediately consult a doctor/medical service. Doctor: administration of corticoid spray.			
First-aid measures after skin contact	agents sticks	Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents without medical advice. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.			
First-aid measures after eye contact	easy t	Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice. Take victim to an ophthalmologist.			
First-aid measures after ingestion	vomiti consu Ingest	ng. Do not apply (ch It a doctor/medical s	mmediately after inges nemical) neutralizing ag service. Call Poison Inf es: immediately to hos	gents without medicator formation Centre (www.	w.big.be/antigif.htm).
4.2. Most important symptoms and e	ffects (acute	and delayed)			
Potential Adverse human health effects and symptoms	: Practi			> 2000 mg/kg). Cau	ises severe skin burns.

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Symptoms/effects after inhalation :	Coughing. Dry/sore throat. Respiratory difficulties. Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of pneumonia. Risk of lung edema.		
Symptoms/effects after skin contact :	Caustic burns/corrosion of the skin.		
Symptoms/effects after eye contact :	Corrosion of the eye tissue.		
Symptoms/effects after ingestion :	Burns to the gastric/intestinal mucosa. Possible esophageal perforation. Blood in vomit. Diarrhoea. Shock. Low arterial pressure. Enlargement/disease of the liver. Decreased renal function.		
Chronic symptoms :	Affection/discolouration of the teeth.		
4.3. Immediate medical attention and spec	ial treatment, if necessary		
Obtain medical assistance.			
SECTION 5: Fire-fighting measures			
5.1. Suitable (and unsuitable) extinguishin	g media		
Suitable extinguishing media :	Quick-acting ABC powder extinguisher. Quick-acting BC powder extinguisher. Quick-acting class B foam extinguisher. Quick-acting CO2 extinguisher. Class B foam (alcohol-resistant). Water spray if puddle cannot expand.		
Unsuitable extinguishing media :	Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.		
5.2. Specific hazards arising from the chemical			
Fire hazard :	DIRECT FIRE HAZARD. Flammable liquid and vapour. Gas/vapor flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Reactions involving a fire hazard: see "Reactivity Hazard".		
Explosion hazard :	DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".		
Hazardous decomposition products in case of fire	Upon combustion: CO and CO2 are formed.		
5.3. Special protective equipment and pred	cautions for fire-fighters		
Firefighting instructions :	Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.		
Protection during firefighting :	Do not enter fire area without proper protective equipment, including respiratory protection.		
SECTION 6: Accidental release measu	ires		
6.1. Personal precautions, protective equip	pment and emergency procedures		
General measures :	Clean up any spills as soon as possible, using an absorbent material to collect it.		
6.1.1. For non-emergency personnel			
Protective equipment :	Gas-tight suit (EN 943). Corrosion-proof suit (EN 14605).		
Emergency procedures :	Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or		

sparks. Spark- and explosion-proof appliances and lighting equipment. Corrosion-proof appliances. Keep containers closed. Wash contaminated clothes. For emergency responders with 

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

6.1.2.

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment	it and cleaning up	
For containment	: Contain released substance, pump into suitable containers. Plug the leak, cut off the supply Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosi gas-air mixture. Dilute combustible/toxic gases/vapours with water spray. Take account of toxic/corrosive precipitation water. Provide equipment/receptacles with earthing. Do not use compressed air for pumping over spills.	ve
Methods for cleaning up	: Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite or kieselguhr, powdered limestone. Scoop absorbed substance into closing containers. Carefully collect th spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected s to manufacturer/competent authority. Wash clothing and equipment after handling.	ne
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### 6.4. Reference to other sections

### No additional information available

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Additional hazards when processed	: Flammable vapors may accumulate in the container.
Precautions for safe handling	: Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly. Work under local exhaust/ventilation. Exhaust gas must be neutralised. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Use corrosionproof equipment. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Keep container tightly closed.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
7.2. Conditions for safe storage, including	any incompatibilities
Incompatible products	: Strong bases. Oxidizing agent. metals.
Incompatible materials	: Direct sunlight. Heat sources. Sources of ignition.
Storage temperature	: >17 °C
Heat-ignition	: KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Prohibitions on mixed storage	: KEEP SUBSTANCE AWAY FROM: combustible materials. oxidizing agents. (strong) bases. metals. alcohols. amines. water/moisture.
Storage area	: Store in a dry area. Keep container in a well-ventilated place. Keep out of direct sunlight. Fireproof storeroom. Keep locked up. Provide for a tub to collect spills. Provide the tank with earthing. Detached building. Store only in a limited quantity. Meet the legal requirements.
Special rules on packaging	<ul> <li>SPECIAL REQUIREMENTS: closing. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.</li> </ul>
Packaging materials	: SUITABLE MATERIAL: stainless steel. aluminium. LDPE (Low Density Poly Ethylene). HDPE. glass. MATERIAL TO AVOID: iron. zinc. lead. copper. bronze. natural rubber.

# SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Acetic Acid (64-19-7)		
USA - ACGIH - Occupational Exposure Limits		
Local name	Acetic acid	
ACGIH TWA (mg/m <sup>3</sup> )	25 mg/m³	
ACGIH TWA (ppm)	10 ppm	
ACGIH STEL (mg/m <sup>3</sup> )	37 mg/m³	
ACGIH STEL (ppm)	15 ppm	
Remark (ACGIH)	TLV® Basis: URT & eye irr; pulm func	
Regulatory reference	ACGIH 2020	
USA - OSHA - Occupational Exposure Limits		
Local name	Acetic acid	
OSHA PEL (TWA) (mg/m <sup>3</sup> )	25 mg/m³	
OSHA PEL (TWA) (ppm)	10 ppm	
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1	
USA - IDLH - Occupational Exposure Limits		
US IDLH (ppm)	50 ppm	
USA - NIOSH - Occupational Exposure Limits		
NIOSH REL (TWA) (mg/m <sup>3</sup> )	25 mg/m³	
NIOSH REL (TWA) [ppm]	10 ppm	
NIOSH REL (STEL) (mg/m <sup>3</sup> )	37 mg/m³	
NIOSH REL (STEL) [ppm]	15 ppm	

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8.2. Appropriate engineering controls Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Material should be handled in a laboratory hood whenever

#### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Protective goggles. Gloves. Face shield. Gas mask with filter type E. Chemical resistant apron.

possible.

#### Materials for protective clothing:

GIVE LESS RESISTANCE: natural rubber. GIVE POOR RESISTANCE: polyethylene. PVA

#### Hand protection:

Protective gloves against chemicals (EN 374)

#### Eye protection:

Protective goggles (EN 166)

#### Skin and body protection:

Head/neck protection. Corrosion-proof clothing (EN 14605)

#### **Respiratory protection:**

Full face mask with filter type A at conc. in air > exposure limit. High vapour/gas concentration: compressed air apparatus (EN 136 + EN 137)

#### Personal protective equipment symbol(s):



#### Thermal hazard protection:

None necessary.

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Molecular mass	: 60.05 g/mol	
Specific gravity / density	: 1040 kg/m³ (25 °C)	
Relative density of saturated gas/air mixture	: 1	
Relative density	: 1.04 (25 °C)	
elative vapor density at 20 °C	: 2.1	
/apor pressure	: 20.79 hPa (25 °C)	
Flammability (solid, gas)	: No data available	
Relative evaporation rate (ether=1)	: 11	
Relative evaporation rate (butyl acetate=1)	: 0.97	
Flash point	: 39 °C (1013 hPa)	
Critical pressure	: 45300 hPa	
ritical temperature	: 322 °C	
oiling point	: 118 °C (1013 hPa)	
reezing point	: No data available	
lelting point	: 17 °C (1013 hPa)	
Н	: 2.4 (0.1 mol/l)	
dor threshold	: No data available	
dor	: Irritating/pungent odour Vinegar odour	
olor	: Colourless	
ppearance	: Liquid.	
nysical state	: Liquid	
I. Information on basic physical and	chemical properties	
SECTION 9: Physical and chemical properties		

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Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in
Solubility	tetrachloromethane. Soluble in glycerol.
	Water: 60.3 g/100ml (25 °C)
	Ethanol: complete Ether: complete
	Acetone: complete
og Pow	: -0.17 (Experimental value, 25 °C)
uto-ignition temperature	: 463 °C (1013 hPa)
Decomposition temperature	: No data available in the literature
/iscosity, kinematic	: 1.168 mm²/s
/iscosity, dynamic	: 1.056 mPa⋅s (25 °C)
Explosion limits	: 4 – 19.9 vol %
	Lower explosive limit (LEL): 4 vol % Upper explosive limit (UEL): 19.9 vol %
Explosive properties	: No data available.
Dxidizing properties	: No data available.
0.2. Other information	
Specific conductivity	: 500000 pS/m (0 °C)
/OC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Hygroscopic. Volatile. Substance has acid reaction.
SECTION 40, Stobility and road	41. 14
SECTION 10: Stability and reac	
0.1. Reactivity	
rolent to explosive reaction with many co	ompounds e.g.: with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) bases.
0.2. Chemical stability	
lygroscopic.	
0.3. Possibility of hazardous reac	tions
Reacts violently with (some) bases: release	se of heat.
0.4. Conditions to avoid	
Extremely high or low temperatures. Incom	mpatible materials.
10.5. Incompatible materials	
	t with bases, copper, silver, mercury, magnesium, zinc and their alloys.
0.6. Hazardous decomposition pr	oducts
Carbon dioxide. Carbon monoxide.	
SECTION 11: Toxicological info	brmation
1.1. Information on toxicological	effects
cute toxicity (oral)	: Not classified
/	
,	: Not classified
Acute toxicity (dermal) Acute toxicity (inhalation)	: Not classified : Harmful if inhaled.
Acute toxicity (dermal)	
Acute toxicity (dermal) Acute toxicity (inhalation)	
Acute toxicity (dermal) Acute toxicity (inhalation) Acetic Acid (64-19-7) LD50 oral rat	: Harmful if inhaled.
Acute toxicity (dermal) Acute toxicity (inhalation) Acetic Acid (64-19-7)	<ul> <li>Harmful if inhaled.</li> <li>3310 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 6 day(s))</li> <li>11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value,</li> </ul>
Acute toxicity (dermal) Acute toxicity (inhalation) Acetic Acid (64-19-7) LD50 oral rat LC50 Inhalation - Rat	<ul> <li>Harmful if inhaled.</li> <li>3310 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 6 day(s))</li> <li>11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))</li> </ul>
Acute toxicity (dermal) Acute toxicity (inhalation) Acetic Acid (64-19-7) LD50 oral rat LC50 Inhalation - Rat ATE US (oral)	<ul> <li>Harmful if inhaled.</li> <li>3310 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 6 day(s))</li> <li>11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))</li> <li>3310 mg/kg body weight</li> </ul>
Acute toxicity (dermal) Acute toxicity (inhalation) Acetic Acid (64-19-7) LD50 oral rat LC50 Inhalation - Rat ATE US (oral) ATE US (vapors) ATE US (dust, mist)	<ul> <li>Harmful if inhaled.</li> <li>3310 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 6 day(s))</li> <li>11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))</li> <li>3310 mg/kg body weight</li> <li>11.4 mg/l/4h</li> </ul>
Acute toxicity (dermal) Acute toxicity (inhalation) Acetic Acid (64-19-7) LD50 oral rat LC50 Inhalation - Rat ATE US (oral) ATE US (vapors) ATE US (dust, mist)	<ul> <li>Harmful if inhaled.</li> <li>3310 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 6 day(s))</li> <li>11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))</li> <li>3310 mg/kg body weight</li> <li>11.4 mg/l/4h</li> <li>11.4 mg/l/4h</li> </ul>
Acute toxicity (dermal) Acute toxicity (inhalation) Acetic Acid (64-19-7) LD50 oral rat LC50 Inhalation - Rat ATE US (oral) ATE US (vapors) ATE US (dust, mist) Skin corrosion/irritation	<ul> <li>Harmful if inhaled.</li> <li>3310 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 6 day(s))</li> <li>11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))</li> <li>3310 mg/kg body weight</li> <li>11.4 mg/l/4h</li> <li>11.4 mg/l/4h</li> <li>Causes severe skin burns.</li> </ul>
Acute toxicity (dermal) Acute toxicity (inhalation) Acetic Acid (64-19-7) LD50 oral rat LC50 Inhalation - Rat ATE US (oral) ATE US (vapors)	<ul> <li>Harmful if inhaled.</li> <li>3310 mg/kg body weight (Rat, Male / female, Experimental value, Oral, 6 day(s))</li> <li>11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))</li> <li>3310 mg/kg body weight</li> <li>11.4 mg/l/4h</li> <li>11.4 mg/l/4h</li> <li>Causes severe skin burns. pH: 2.4 (0.1 mol/l)</li> </ul>

### : Not classified EN (English US)

: Not classified

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Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: 1.168 mm²/s
Likely routes of exposure	: Inhalation. Skin and eye contact.
Potential Adverse human health effects and symptoms	: Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Causes severe skin burns. Causes serious eye damage.
Symptoms/effects after inhalation	: Coughing. Dry/sore throat. Respiratory difficulties. Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of pneumonia. Risk of lung edema.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact	: Corrosion of the eye tissue.
Symptoms/effects after ingestion	<ul> <li>Burns to the gastric/intestinal mucosa. Possible esophageal perforation. Blood in vomit. Diarrhoea. Shock. Low arterial pressure. Enlargement/disease of the liver. Decreased renal function.</li> </ul>
Chronic symptoms	: Affection/discolouration of the teeth.

<b>SECTION 12: Ecological information</b>	
12.1. Toxicity	
Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Not harmful to crustacea. Not harmful to fishes. Not harmful to algae. Not harmful to bacteria. pH shift.
Acetic Acid (64-19-7)	
LC50 fish 1	> 1000 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	> 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

Readily biodegradable in the soil. Readily biodegradable in water.
0.6 – 0.74 g O <sub>2</sub> /g substance
1.03 g O₂/g substance
1.07 g O₂/g substance

12.3. Bioaccumulative potential		
Acetic Acid (64-19-7)		
BCF fish 1	3.16 (Pisces, Fresh water, QSAR)	
Log Pow	-0.17 (Experimental value, 25 °C)	
Bioaccumulative potential	Not bioaccumulative.	

### 12.4. Mobility in soil

Acetic Acid (64-19-7)	
Surface tension	26.3 mN/m (30 °C)
Ecology - soil	Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.

#### 12.5. Other adverse effects

No additional information available

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3.1. Disposal methods	
Naste disposal recommendations	: Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.
Additional information	<ul> <li>Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.</li> </ul>

### **Department of Transportation (DOT)**

In accordance with DOT

Transport document description UN-No.(DOT) Proper Shipping Name (DOT)

Transport hazard class(es) (DOT) Packing group (DOT) Subsidiary risk (DOT) Hazard labels (DOT)

: UN2789 Acetic acid, glacial (with more than 80 percent acid, by mass), 8 (3), II : UN2789

: Acetic acid, glacial

with more than 80 percent acid, by mass

- : 8 Class 8 Corrosive material 49 CFR 173.136
- : II Medium Danger
- : 3 Class 3 Flammable and combustible liquid 49 CFR 173.120
- 8 Corrosive

: 202

: 243

3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx) DOT Packaging Bulk (49 CFR 173.xxx) DOT Special Provisions (49 CFR 172.102)

: A3 - For combination packaging, if glass inner packaging (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packaging.

A6 - For combination packaging, if plastic inner packaging are used, they must be packed in tightly closed metal receptacles before packing in outer packaging.

A7 - Steel packaging must be corrosion-resistant or have protection against corrosion. A10 - When aluminum or aluminum alloy construction materials are used, they must be resistant to corrosion.

B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized.

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)

TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C

		(59 F) and 50 C (122 F), respectively.	
DOT Packaging Exceptions (49 CFR 173.xxx)	:	154	
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	1 L	
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	30 L	
DOT Vessel Stowage Location	:	A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.	
Other information	:	No supplementary information available.	
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### SECTION 15: Regulatory information

15.1. US Federal regulations			
Acetic Acid (64-19-7)			
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not subject to reporting requirements of the United States SARA Section 313			
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb		
SARA Section 311/312 Hazard Classes	Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Acute toxicity (any route of exposure)		

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations	
CANADA	
Acetic Acid (64-19-7)	
Listed on the Canadian DSL (Domestic Substances List)	
EU-Regulations No additional information available National regulations No additional information available	
15.3. US State regulations	

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

### **SECTION 16: Other information**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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: 09/28/2020

#### Full text of H-phrases: see section 16:

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H226	Flammable liquid and vapor
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H402	Harmful to aquatic life
NFPA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard	<ul> <li>2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.</li> </ul>
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.
Hazard Rating	
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	<ul> <li>2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II &amp; IIIA)</li> </ul>
Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal protection	: H
	H - Splash goggles, Gloves, Synthetic apron, Vapor respirator
SDS US LabChem	

Safety Data Sheet

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