according to Hazardous Products Regulations (SOR/2015-17)

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Acetic acid, glacial

Revision number: 4.1

Dreduct normal			5010601	
Product name:	Instrument Quality Acetic Acid, Glacial	Product number(s):	S020601	
	Technical Grade Acetic Acid, Glacial		5020001	
	Instrument Quality Acetic Acid, \geq 99.7%		S050601	
EU Index numb	er: 607-002-00-6			
Synonyms:	Ethanoic acid; Methanecarboxylic acid			
Chemical name	FR Acide acétique; DE Essigsäure; NL Azijnz	uur; ES Ácido acético; IT Acido acetic	0	
1.2. Relevant ide	ntified uses of the substance or mixture and use	s advised against		
Identified uses:	For laboratory use only. Not for drug, food,	or household use.		
1.3. Details of th	e supplier of the safety data sheet			
Manufacturer:				
SEASTAR CHEM	CALS ULC			
2061 Henry Ave	nue West, Sidney, BC V8L 5Z6 CANADA			
1-250-655-5880				
Email: SCI-QA&I	RegulatoryAffairs@seastarchemicals.com			
1.4. Emergency t	elephone number			
CAN (CANUTEC):	1-613-996-6666 (24-hour)			
SECTION 2	Hazard identification			
2.1. Classification	n of the substance or mixture			
Classification in	accordance 29 CFR 1910 (OSHA HCS) / SOR/2015	5-17 (WHMIS HPR) / Regulation (EC)	No 1272/2008	
Flammable liqui	d – Category 3			
Skin corrosion –	Category 1A			
2.2. Label eleme	nts			
Pictograms:				
	<u>(1)</u>			
Signal word	Danger			
Hazard	H226: Elammable liquid and vapour			
statements:	H314: Causes severe skin burns and eye damage			
Precautionary	P260: Do not breathe fumes/gas/mist/vapours/s	pray.		
statements:	P280: Wear protective gloves/protective clothing	g/eye protection/face protection.		
	P310: Immediately call a POISON CENTER or doc	tor.		
	P301+P330+P331: IF SWALLOWED: Rinse mouth	. Do NOT induce vomiting.		
	P303+P361+P353: IF ON SKIN (or hair): Take off i	mmediately all contaminated clothir	ng. Rinse skin with water.	
	P305+P351+P338: IF IN EYES: Rinse cautiously v	with water for several minutes. Rem	ove contact lenses, if present	
2.3. Other hazar	ds			
For the full text of	 f the H-Statement(s) and P-Statement(s) mention	ed in this Section, see Section 16.		
SECTION 3	Composition/Information on ingredients			
3.1. Substances				

Chemical name	Chemical formula	CAS №	EINECS №
Acetic acid, glacial	CH₃COOH	64-19-7	200-580-7



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SECTION 4 First-aid measures

4.1. Description of first aid measures

Inhalation: This chemical is a strong respiratory irritant. Take proper precautions to ensure your own safety before attempting rescue (e.g., wear appropriate protective equipment). Remove source of contamination or move victim to fresh air. Immediately obtain medical attention.

Skin: Avoid direct contact. Wear chemical protective clothing, if necessary. As quickly as possible, remove contaminated clothing, shoes, and leather goods (e.g., watchbands, belts). Immediately flush with lukewarm, gently flowing water for 15-20 minutes. If irritation persists, repeat flushing. Immediately obtain medical attention. Double bag, seal, label and leave contaminated clothing, shoes, and leather goods at the scene for safe disposal.

Eye: Avoid direct contact. Wear chemical protective clothing, if necessary. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens until flushing is done. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately obtain medical attention.

Ingestion: Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. If vomiting occurs naturally, have victim rinse mouth with water again. Immediately obtain medical attention.

First aid comments: Provide general supportive measures (comfort, warmth, rest). Consult a doctor and/or the nearest Poison Control Centre for all exposures. All first aid procedures should be periodically reviewed by a doctor familiar with the material and its conditions of use in the workplace.

4.2. Most important symptoms and effects, both acute and delayed

Vapor is irritating to the respiratory tract. May cause lung injury—effects may be delayed. Concentrated solutions are CORROSIVE to eyes and skin. Causes permanent eye damage, including blindness, and skin burns, including tissue death and permanent scarring.

4.3. Indication of any immediate medical attention and special treatment needed

Consult a doctor and/or the nearest Poison Control Centre for all exposures.

SECTION 5 Fire-fighting measures

5.1. Extinguishing media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Special "alcohol resistant fire-fighting foams" are recommended for use with any polar flammable liquid that is completely soluble in water, like acetic acid. Foam manufacturers should be consulted for recommendations regarding types of foams and application rates.

5.2. Special hazards arising from the substance or mixture

Flammable liquid and vapour. Can form explosive mixtures with air at, or above, 39 °C. Vapour is heavier than air and may travel a considerable distance to a source of ignition and flash back to a leak or open container. During a fire, toxic carbon monoxide, carbon dioxide and other irritant gases and vapour, which may include unburned acid and toxic constituents may be generated. Vapours from warm liquid can accumulate in confined spaces, resulting in a flammability and toxicity hazard. Closed containers may rupture violently when heated.

Hazardous combustion products: Irritant gases, which may include unburned acid and toxic constituents.

5.3. Advice for firefighters

Firefighter's normal protective clothing (Bunker Gear) will not provide adequate protection. Chemical resistant clothing (e.g., chemical splash suit) and positive pressure self-contained breathing apparatus (NIOSH approved or equivalent) may be necessary.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Wear adequate personal protective equipment. Extinguish or remove all ignition sources.

6.2. Environmental precautions

Notify government occupational health and safety and environmental authorities.



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6.3. Methods and material for containment and cleaning up

Do not touch spilled material. Prevent material from entering sewers or confined spaces. Stop or reduce leak if safe to do so. Contain spill with earth, sand, or absorbent material that does not react with spilled material. Remove liquid by pumps or vacuum equipment. Place in suitable, covered, labelled containers.

<u>SMALL SPILLS</u>: Soak up spill with absorbent material which does not react with spilled chemical. Put material in suitable, covered, labelled containers. Flush area with water. Contaminated absorbent material may pose the same hazards as the spilled product.

LARGE SPILLS: Contact fire and emergency services and supplier for advice.

6.4. Reference to other sections

See Section 7 for information on handling. See Section 8 for information on personal protection. See Section 13 for information on disposal.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Do not use this product once the expiration date is reached. The expiration date defines both the end of the product shelf life and its certification. The expiration date is conditional; products must be stored and transported according to SEASTAR[™]'s Product Integrity Guidelines.

Plastic bottles should be inspected regularly, specifically HDPE bottles, for any evidence of change to the plastic bottle's ability to deform. The ability to deform is defined by its ductility/plasticity/malleability/embrittlement, or hardening/compressibility. If any change is noticed, carefully and safely transfer or dispose of the product according to your safe handling practices and procedures. Any product disposal must be done according to applicable regulations governing the disposal of the hazardous product.

This material is a CORROSIVE (to eyes, skin, and some metals), COMBUSTIBLE LIQUID. Before handling it is important that engineering controls are operating, and that protective equipment requirements and personal hygiene measures are being followed. People working with this chemical should be properly trained regarding its hazards and its safe use.

Unprotected persons should avoid all contact with this chemical including contaminated equipment. Keep only in the original container. Inspect containers for damage or leaks before handling. Immediately report leaks, spills, or failures of the engineering controls. Avoid all ignition sources. Post "NO-SMOKING" signs. It is good practice to keep all areas where this material is handled clear of other materials which can burn (e.g., cardboard, sawdust).

Use in the smallest possible amounts, in a well-ventilated area, separate from the storage area. Avoid generating vapours or mists. Prevent the release of vapours or mists into the air. Do not use with incompatible materials such as strong oxidizing agents, strong alkalis or caustics, most common metals, and others. See Section 10 for more information. Never return contaminated material to its original container. Label containers. Avoid damaging containers. Keep containers closed when not in use. Empty containers may contain hazardous residues.

Ground all drums, transfer vessels, hoses, and piping. Ground clips must contact bare metal. Use corrosion-resistant transfer equipment when dispensing. Never add water to a corrosive. Always add corrosives to water. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation. Never perform any welding, cutting, soldering, drilling or other hot work on an empty vessel, containers or piping until all liquid and vapours have been cleared. Have suitable emergency equipment for fires, spills, and leaks readily available. Practice good housekeeping. Maintain handling equipment. Comply with applicable regulations.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat and ignition sources. Keep storage area clear of burnable materials (e.g., old rags, cardboard). Lighted cigarettes, matches, or any other ignition sources should not be allowed around indoor or outdoor storage areas.

Store away from oxidizers and corrosives and other incompatible materials such as most common metals and others. See Section 10 for more information.

Inspect all incoming containers to make sure they are properly labelled and not damaged. Keep quantity stored as small as possible. Keep only in the original container. Keep containers tightly closed. No stacking of containers. Protect from damage. Keep empty



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containers in separate storage area. Empty containers may contain hazardous residues. Keep closed.

Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Keep storage area separate from work areas. Store away from work process and production areas, elevators, building, and room exits or main aisles leading to exits. Post warning signs. Inspect periodically for damage or leaks.

Have appropriate fire extinguishers and spill clean-up equipment in or near storage area. Store away from heat and ignition sources. Storage facilities should be made of fire-resistant and corrosion-resistant materials.

Store combustible materials according to applicable occupational health and safety regulations and fire and building codes. In general, storage tanks should be above ground over an area sealed on the bottom and diked to hold entire contents.

7.3. Specific end use(s)

No information available.

SECTION 8 Exposu	Exposure controls/Personal protection		
8.1. Control parameters			
Chemical name	Limit value type	Exposure limit value	Source
Acetic acid, as $C_2H_4O_2$	TLV-TWA	10 ppm	USA ACGIH
	PEL-TWA, REL-TWA	10 ppm (25 mg/m ³)	USA OSHA, USA NIOSH
	TLV-STEL	15 ppm	USA ACGIH
	REL-STEL	15 ppm (37 mg/m ³)	USA NIOSH
	IDLH	50 ppm	USA NIOSH

8.2. Exposure controls

NOTE: Exposure to this material can be controlled in many ways. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. This general information can be used to help develop specific control measures. Ensure that control systems are properly designed and maintained. Comply with occupational, environmental, fire, and other applicable regulations.

Engineering Controls: Engineering control methods to reduce hazardous exposures are preferred. Methods include mechanical ventilation (dilution and local exhaust), process or personnel enclosure, control of process conditions, and process modification (e.g., substitution of a less hazardous material). Administrative controls and personal protective equipment may also be required.

Use local exhaust ventilation and process enclosure if necessary to control airborne mist and vapours. Use a corrosion-resistant ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside taking necessary precautions for environmental protection. Supply sufficient replacement air to make up for air removed by exhaust systems. Have a safety shower/eye-wash fountain readily available in the immediate work area.

Personal Protective Equipment: If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection. Have appropriate equipment available for use in emergencies such as spills or fire. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance, and inspection.

Eye / Face protection: 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. A face shield may also be necessary.

Skin protection: Wear impervious gloves and appropriate protective clothing. Choose body protection according to the amount and concentration of the substance at the workplace. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Resistance of Materials for Protective Clothing: Guidelines for acetic acid:

RECOMMENDED (resistance to breakthrough longer than 8 hours): Butyl rubber; Silver Shield[®] - PE/EVAL/PE; Saranex[®]; Microchem[®] 4000; Trellchem[®] HPS and VPS; Tychem[®] F, ThermoPro, Responder[®] CSM, TK, and Reflector; Zytron[®] 500.

RECOMMENDED (resistance to breakthrough longer than 4 hours): Viton[®]/Butyl rubber; ChemMAX[®] 4; Interceptor[®]; Tychem[®] BR/LV.

CAUTION, use for short periods only (resistance to breakthrough within 1 to 4 hours): Neoprene rubber; Viton[®]; Barrier[®] - PE/PA/PE; ChemMAX[®] 3; Tychem[®] CPF 3; Zytron[®] 300.



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NOT RECOMMENDED for use (resistance to breakthrough less than 1 hour and/or poor degradation rating): Natural rubber; Nitrile rubber; Polyvinyl alcohol, Polyvinyl chloride (PVC).

Inhalation / Ventilation: NIOSH recommendations for Acetic acid concentrations in air:

Up to 50 ppm: Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s), OR Any air-purifying, full facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister, OR Any self-contained breathing apparatus with a full facepiece, OR Any supplied-air respirator with a full facepiece.

Emergency or planned entry into unknown concentrations or IDLH conditions: Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, OR Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus.

Escape: Any air-purifying, full-facepiece respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister, OR Any appropriate escape-type, self-contained breathing apparatus.

Personal Hygiene: Remove contaminated clothing promptly. Keep contaminated clothing in closed containers. Discard or launder before re-wearing. Inform laundry personnel of contaminant's hazards. Wash hands thoroughly after handling this material. Maintain good housekeeping.

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	iquid Vapour pressure:		$1 = 2 k P_2 (11.4 mm H q)$
Colour:	Clear, colourless	(partial pressure at 20 °C)	1.52 KPa (11.4 MMHg)
Molecular weight:	60.05 g/mol	Vapour density:	2.07 (air=1) (calc.)
Odour:	Pungent – acetic odour		99% w/w: 1.0524 g/mL
Odour threshold:	0.037-0.15 ppm (detection)	Density: (at 20 °C)	100% w/w: 1.0498 g/mL
pH:	2.4 (1 M solution)		Soluble in all proportions in water. Soluble in all proportions in ethanol, acetone, benzene, diethyl ether, carbon tetrachloride, and glycerol.
Melting/freezing point:	100% w/w: 16.6 °C (61.9 °F)	C-b-billion	
Boiling point:	100% w/w: 117.9 °C (244.2 °F)	Solubility:	
Flesh neintr (cleased own)	100% w/w: 39 °C (103 °F); 43 °C (109.4 °F)		
Flash point: (closed cup)		Partition coefficient:	Log P(oct) = -0.17
Evaporation rate:	0.97 (n-butyl acetate = 1)	Auto-ignition	100% w/w: 426 °C (799 °F); 463 °C
		temperature:	(867 °F); 516 °C (961 °F)
	2 - Must be moderately heated or	Decomposition	Not available.
Flammability:	exposed to relatively high ambient temperatures before ignition can occur.	temperature:	
		Viscosity: (at 20 °C)	100% w/w: 1.22 mPa.s (1.22 centipoises)
Lower flammable	100% w/w: 4%; also reported as	Upper flammable (explosive)	100% w/w: 16%; also reported as
(explosive) limit (LFL/LEL):	5.3%-5.4%	limit (UFL/UEL):	19.9%
9.2. Other information			

No information available.

SECTION 10 Stability and reactivity

10.1. Reactivity

Attacks many forms of plastics, rubber, and coatings; dissolves synthetic resins and rubber.

10.2. Chemical stability

Stable at room temperature in closed containers under normal storage and handling conditions. Attacks many forms of plastics, rubber, and coatings; dissolves synthetic resins and rubber.



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10.3. Possibility of hazardous reactions

See Section 10.5 for incompatible materials.

10.4. Conditions to avoid

Temperatures above 39°C, open flames, static charge, sparks, and other ignition sources.

10.5. Incompatible materials

NOTE: Chemical reactions that could result in a hazardous situation (e.g., generation of flammable or toxic chemicals, fire, or detonation) are listed here. Many of these reactions can be done safely if specific control measures (e.g., cooling of the reaction) are in place. Although not intended to be complete, an overview of important reactions involving common chemicals is provided to assist in the development of safe work practices.

STRONG OXIDIZING AGENTS (e.g., chromic acid, hydrogen peroxide, nitric acid, perchloric acid, potassium permanganate, sodium peroxide) or BROMINE PENTAFLUORIDE, CHLORINE TRIFLUORIDE - react violently, with risk of fire and explosion.

PHOSPHORUS TRICHLORIDE - explosion may occur due to the possible formation of spontaneously flammable phosphine.

p-XYLENE - during production of terephthalic acid, in which p-xylene is oxidized in the presence of acetic acid, detonating mixtures may be produced.

STRONG ALKALIS or CAUSTICS (e.g., sodium or potassium hydroxide) or BASES - may react violently.

PHOSPHORUS ISOCYANATE - react violently.

POTASSIUM tert-BUTOXIDE - ignition occurs after 3 minutes.

AMMONIUM NITRATE - may ignite when warmed.

MOST COMMON METALS (except aluminum) - may give off flammable hydrogen gas.

AMMONIUM THIOSULFATE - releases toxic sulfur dioxide under ambient conditions.

ACETALDEHYDE - polymerization occurs, with evolution of heat.

2-AMINOETHANOL, CHLOROSULFONIC ACID, ETHYLENE DIAMINE, ETHYLENEIMINE, OLEUM - mixing in a closed container caused the temperature and pressure to rise.

10.6. Hazardous decomposition products

Carbon oxides.

10.7. Corrosivity to metals:

Carbon steel (e.g., types 1010, 1020, 1075 and 1095) is attacked (corrosion rate greater than 1.25 mm/year) by all concentrations of acetic acid up to 240 °C (115.6 °F). Acetic acid is also corrosive to cast iron, gray cast iron, ductile cast iron, galvanized steel, zinc, brass, naval brass, bronze, silicon bronze, aluminum bronze, lead, particularly when diluted with water. Acetic acid (all concentrations) is not corrosive to some stainless steels (e.g., types 304, 316 and Carpenter 20Cb-3), high silicon cast iron (Duriron), nickel and nickel-base alloys, Hastelloy B, C/C-276 and D, Inconel 600 and Incoloy 825, copper-nickel (70-30 and 90-10), tantalum, titanium, and zirconium. Copper and alloys, except those with high zinc content, show good resistance at all concentrations of acetic acid (up to and above the boiling temperature (117.9 °C (244.2 °F)), in the absence of oxygen and other oxidants. Depending on conditions, acetic acid (greater than 99%) may be used with or stored and shipped in aluminum (alloys not specified). Aluminum slowly corrodes, forming a layer of aluminum acetate that prevents further corrosion. Water increases the corrosion rate significantly while mercury, present as an impurity, catalyzes the corrosion. Acetic acid (50-100%) is corrosive to type 3003 aluminum at the boiling point (117.9 °C (244.2 °F)). Aeration and oxidizing ions have detrimental effects on the resistance of some stainless steels (e.g., types 301, 304, 321, 400 series), carbon steel (e.g., types 1010, 1020, 1075 and 1985), nickel, Inconel 600, copper and alloys, brass, silicon bronze, copper nickel (70-30 and 90-10), cartridge brass, naval brass, and admiralty brass to corrosion by acetic acids.

10.8. Corrosivity to non-metals:

At room temperature, 50-100% acetic acid attacks plastics, such as nylon, acrylonitrile-butadiene-styrene (ABS), polyurethane (riged), polybutylene terephthalate, polystyrene; 80-100% acetic acid attacks plastics, such as polyvinyl chloride (PVC), and chlorinated polyvinyl chloride (CPVC). Glacial acetic acid attacks plastics, such as styrene-acrylonitrile (SAN), thermoset polyester (bisphenol-A-fumarate and isophthalic acid), thermoset vinyl ester and thermoset chlorinated polyester. All concentrations of acetic



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acid at room temperature do not attack plastics, such as Teflon and other fluorocarbons, like ethylene tetrafluoroethylene (Tefzel), ethylene chlorotrifluoroethylene (Halar) and polyvinylidene fluoride (Kynar), polyvinylidene chloride (Saran), polypropylene, chlorinated polyether (Penton), high molecular polyethylene (UMWPE), ultra high molecular weight polyethylene (UHMWPE), crosslinked polyethylene (XPE), polyphenylene oxide (Noryl), general purpose thermoset polyester and thermoset epoxy (up to 85%). At room temperature, 50-100% acetic acid attacks elastomers, such as ethylene-propylene terploymer (EPT), natural rubber, isoprene; polyurethane and polyether-urethane; and coatings, such as epoxy (coal tar, chemical resistant, and polyamide) and urethanes. Glacial acetic acid attacks elastomers, such as nitrile rubber (Nitrile Buna NBR), Viton A (FKM), chlorosulfonated polyethylene (Hypalon; CSM), polyacrylate, Nordel, soft rubber, fluorosilicone, nylon 11 and 12, flexible polyvinyl chloride (PVC) and Fluoraz; and coatings, such as epoxy (coal tar, chemical resistant, and polyamide) and urethanes. All concentrations of acetic acid at room temperature do not attack elastomers, such as Teflon, other fluorocarbons, like Chemraz and Kalrez, butyl rubber (isobutyleneisoprene; IIR) and hard rubber; and coatings such as polyester and vinyls.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

RTECS#: AF1225000 (Acetic acid, CAS# 64-19-7) Acute toxicity: Oral LD50: 3,310 mg/kg (rat) Dermal LD50: No information available. Inhalation LC50: 11,000 mg/m³/4H (rat); 5,620 ppm/1H (mouse) Other information: No information available.

Exposure routes:

Inhalation: Acetic acid readily forms high vapour concentrations at normal temperatures. Accidental inhalation of high concentrations may cause corrosive injury to the respiratory tract, inflammation, nose and throat irritation, shortness of breath, cough, wheezing, and reversible lung injury. Effects may be delayed.

Skin: The degree of irritation depends on the concentration of acetic acid and the length of exposure. Highly concentrated solutions or pure acetic acid can cause corrosive tissue injury with deep burns, tissue death and permanent scarring. Less concentrated solutions can cause mild to severe irritation.

Eye: Concentrated solutions are corrosive and can cause permanent eye damage, including blindness.

Ingestion: Causes severe corrosive injury to the gastrointestinal tract and stomach. Acetic acid may be aspirated (inhaled into the lungs) during ingestion or vomiting. Aspiration of even a small amount of liquid could result in a life-threatening accumulation of fluid in the lungs. Severe lung damage (edema), respiratory failure, cardiac arrest and death may result.

Germ cell mutagenicity: Acetic acid is not known to be a mutagen.

Carcinogenicity: Acetic acid is not known to be a carcinogen. The International Agency for Research on Cancer (IARC) has not evaluated the carcinogenicity of this chemical. The American Conference of Governmental Industrial Hygienists (ACGIH) has not assigned a carcinogenicity designation to this chemical. The US National Toxicology Program (NTP) has not listed this chemical in its report on carcinogens.

Reproductive toxicity: Acetic acid is not known to cause reproductive toxicity.

Additional information: Repeated inhalation may cause pulmonary edema, bronchopneumonia, or chemical pneumonitis. Prolonged or repeated exposure may cause dermatitis, erosion of teeth, conjunctivitis, and cumulative systemic injury. To the best of our knowledge, the chronic toxicity of this substance has not been fully investigated.

SECTION 12 Ecological information

12.1. Toxicity

Shrimp: LC50 = 100-330 ppm/48H (aerated water); Bluegill sunfish (*Lepomis macrochirus*): LC50 = 75 mg/L/96H; Mosquito fish (*Gambusia affinis*): LC50 = 251 mg/L/96H

12.2. Persistence and degradability

Persistent. The predicted ultimate degradation half-life for acetic acid is 8.67 days.

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12.3. Bioaccumulative potential

Acetic acid shows no potential for biological accumulation or food chain contamination.

12.4. Mobility in soil

Acetic acid is not expected to adsorb to suspended solids and sediment.

12.5. Results of PBT and vPvB assessment

Acetic acid is not PBT / vPvB.

12.6. Other adverse effects

No information available.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Review local/regional/international regulations or requirements prior to disposal. Store material for disposal as indicated in Storage Conditions.

Contaminated packaging: Dispose of as unused product.

SECTION 14 Transport information		
14.1. UN number	UN2789	
14.2. UN proper shipping name	ACETIC ACID, GLACIAL	
14.3. Transport hazard class(es)	8 (3)	
Hazard label(s):	8+3	
14.4. Packing group	ll	
14.5. Environmental hazards		
Marine pollutant:	No	
14.6. Special precautions for user		
IMDG EMS number:	F-E, S-C	
IMDG Category:	Category A	
14.7. Transport in bulk according to Annex II of Ma	irpol and the IBC Code	

Not applicable.

SECTION 15 Regulatory information

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

OSHA Hazards: CAS #64-19-7 meets criteria for hazardous material, as defined by 29 CFR 1910.1200.

SARA:

302: This material contains Acetic acid (CAS# 64-19-7), which is not subject to the reporting requirements.

313: This material contains Acetic acid (CAS# 64-19-7), which is not subject to the reporting requirements of Section 313 of SARA Title III.

311/312: This material contains Acetic acid (CAS# 64-19-7).

Right To Know Lists:

Massachusetts: CAS# 64-19-7 is listed, 100 lbs RQ. Pennsylvania: CAS# 64-19-7 is listed, E (environmental hazard). New Jersey: CAS# 64-19-7 is listed, RTK# 0004. California Prop. 65: CAS# 64-19-7 is not subject to this act.

Inventory Status:

Canada DSL/NDSL Inventory List: CAS# 64-19-7 is listed.

US TSCA Inventory List: CAS# 64-19-7 is listed.

EC Inventory List: CAS# 64-19-7 is listed, EC# 200-580-7.



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15.2. Chemical safety assessment

Not applicable.

SECTION 16 Other information

Full text of H-Statement(s) and P-Statement(s):

H226: Flammable liquid and vapour.

H314: Causes severe skin burns and eye damage.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233: Keep container tightly closed.

P240: Ground and bond container and receiving equipment.

P260: Do not breathe fumes/gas/mist/vapours/spray.

P264: Wash thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P310: Immediately call a POISON CENTER or doctor.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P363: Wash contaminated clothing before reuse.

P304+P340: IF INHALED: Remove person to fresh air and keep 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.

P370+P378: In case of fire: Use dry chemical, carbon dioxide, or alcohol-resistant foam to extinguish.

P403+P233: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents/container according to federal, regional and local government requirements.

Date modified: 08-2022, Supersedes 10-2018, 07-2014, 01-2014, 04-2011

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