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DOCUMENT #: F/RPI/QC 7.7.3-02	PRODUCT NAME: Glacial Acetic Acid		RPI ITEM NO: A12800

SECTION 1 - CHEMICAL IDENTIFICATION

PRODUCT NAME: Glacial Acetic Acid
 RPI CATALOG #: A12800
 SUPPLIER'S NAME: Research Products International Corp.
 SUPPLIERS ADDRESS: 410 N Business Center Drive Mount Prospect, IL 60056
 EMERGENCY CONTACT: 1-800-424-9300
 OTHER INFORMATION: 847-635-7330

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H226	Flammable liquids	Category 3
H314	Skin corrosion	Category 1A
H317	Skin Sensitisation	Category 1
H334	Respiratory Sensitisation	Category 1

2.2 GHS Label elements, including Hazard and Precautionary Statement(s) Pictogram



Signal word: Danger

Hazard statement(s)

H226	Flammable liquid and vapour
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled

Prevention, Response, Storage and Disposal Precautionary Statement(s)

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
P260	Avoid breathing dust/fume/gas/mist/vapors/spray.

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P264	Wash skin thoroughly after handling
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection
P285	In case of inadequate ventilation wear respiratory protection
P301+ P330+ P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P303+ P361+ P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position 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.
P310	Immediately call a POISON CENTER or doctor/ physician.
P321	Specific treatment (see. on this label).
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P362 + P364	Take off contaminated clothing and wash before reuse.
P363	Wash contaminated clothing before reuse
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS

CAS Number: 64-19-7
EINECS Number: 200-580-7
Molecular Weight: 60.05 g/mol
Formula: C₂H₄O₂

SECTION 4 - FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel.

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Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed: Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2 Special hazards arising from the substance or mixture: Carbon oxides.

5.3 Precautions for fire-fighters: Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

5.4 Further information: No data available

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions: Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up: Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections: For required PPE see section 8. For disposal see section 13.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling: Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities: Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Keep in a dry place. Moisture sensitive. Storage class (TRGS 510): Flammable liquids.

7.3 Specific end use(s): Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Components with workplace control parameters

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetic acid	TWA: 10 ppm	(Vacated) TWA: 10 ppm	IDLH: 50 ppm
	STEL: 15 ppm	(Vacated) TWA: 25 mg/m ³	TWA: 10 ppm

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Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Acetic acid	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³	TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³	TWA: 25 mg/m ³ STEL: 15 ppm TWA: 10 ppm STEL: 15 ppm

- ❖ **ACGIH:** American Conference of Governmental Industrial Hygienists.
- ❖ **OSHA:** Occupational Safety and Health Administration.
- ❖ **NIOSH IDLH:** The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health.

8.2 Exposure Controls

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

8.3 Personal protective equipment

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin 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
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Colorless Liquid	Surface Tension at 10.0 °C	28.8 mN/m
Odor	Odorless	Vapor Density	No Data Available
Odor Threshold	Pungent	Relative Density at 25 °C	1.049 g/cm ³
pH	2.4 at 60.05 g/l	Water Solubility	Soluble in Water
Melting / Freezing Point	No Data Available	Partition Coefficient	No Data Available
Initial Boiling Point Range	117 - 118 °C	Auto-Ignition Temperature	485.0 °C
Flash Point	40.0 °C	Decomposition Temperature	No Data Available
Evaporation Rate	No Data Available	Viscosity @ 25 °C	1.53 mPa.s
Flammability (Solid, Gas)	No Data Available	Explosive Properties	No Data Available

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Upper / Lower Flammability Or Explosive Limits	Upper explosion limit: 19.9 %(V) Lower explosion limit: 4 %(V)	Vapor Pressure	73.3 hPa t 50.0 °C 15.2 hPa at 20.0 °C
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SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Hazardous Decomposition Products: Carbon monoxide (CO), Carbon dioxide (CO₂), Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Polymerization: No Data Available.

Incompatibilities: Oxidizing agents, soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, e.g. potassium permanganate, Amines, Alcohols, Nitric acid.

Conditions to avoid: Heat, flames and sparks.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity

LD50 Oral	LD50 Dermal	LD50 Inhalation
3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Component	Freshwater Fish	Microtox	Water Flea
Acetic acid	Pimephales promelas: LC50= 88 mg/L/96h Lepomis macrochirus: LC50 =75 mg/L/96h	Photobacterium phosphoreum: EC50 = 8.8 mg/L/15 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/25 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/5 min	EC50 = 95 mg/L/24h

Persistence and degradability/ Bioaccumulative potential: No data available

Results of PBT and vPvB assessment: No data available

Other adverse effects: No data available

Chronic Toxicity: There are no known carcinogenic chemicals in this product

Mobility: Will likely be mobile in the environment due to its water solubility.

Component	log Pow
Acetic acid	-0.2

SECTION 13 - DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local

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disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14 - TRANSPORT INFORMATION

	UN#	Proper Shipping Name	Hazard Class	Packaging Group
DOT	2789	Acetic Acid, Glacial	8 (3)	II
TDG	2789	Acetic Acid, Glacial	8 (3)	II
IATA	2789	Acetic Acid, Glacial	8 (3)	II
IMDG/IMO	2789	Acetic Acid, Glacial	8 (3)	II

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-	-	Listed	Listed	Listed	Listed	Listed

USA FEDERAL REGULATION

SARA 311/312 HAZARDOUS CATEGORIZATION

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release Of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

SARA 313/Clean Air Act/ TSCA 12(b)/ OSHA: Not Applicable.

Clean Water Act

Component	CWA – Hazardous Substances	CWA – Reportable Quantities
Acetic Acid	Listed	5000 lb

CERCLA: This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Component	Hazardous Substances RQs	CERCLA EHS RQs
Acetic Acid	5000 lb	-

California Proposition 65: This product does not contain any Proposition 65 chemicals.

HMIS Rating

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
3	0	2	0

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NFPA Rating

Health hazard	Fire Hazard	Reactivity Hazard
3	2	0

STATE RIGHT TO KNOW

Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Listed	Listed	Listed	-	-

US DEPARTMENT OF TRANSPORTATION

REPORTABLE QUANTITY (RQ)	DOT MARINE POLLUTANT	DOT SEVER MARINE POLLUTANT
Yes	No	No

U.S. DEPARTMENT OF HOMELAND SECURITY: This product does not contain any DHS chemicals.

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

This SDS complies with the requirements of Regulation (EC).

SECTION 16 - OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Research Products International Corp. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. This product is sold for laboratory research and development purposes use only.