GLACIAL ACETIC ACID 100%

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Photo Systems Inc.
7200 Huron River Drive, Dexter, MI 48130
Product Name: GLACIAL ACETIC ACID 100 %
Product Number: 10682, 10683
Product Use: Acetic Acid
Customer Information Phone Number: 1-734-424-9625
CHEMTREC®: 24 Hour Emergency Transport Phone Number: 1-800-424-9300
Date Reviewed: 4/01/2016
Rev. 2.0

2. HAZARDOUS IDENTIFICATION

2.1 Classification of the substance or mixture

Health hazard
Flammable liquid (Category 3) H226
Causes severe skin burns and eye damage (Skin Corr. 1A) H314
Serious Eye damage/eye irritation (Category 1) H318

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: DANGER

Hazard statement(s)
H226 Flammable liquid and vapor
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames – no smoking
P264 Wash skin thoroughly after handling
P270 Do not eat, drink, or smoke when using this product
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 IF SWALLOWED; call a POISON CENTER or doctor/physician Do NOT induce vomiting. Corrosive. Material causes irritation and burns to the digestive tract. May be fatal if swallowed.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. Working solution low hazard for routine handling.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Will cause severe irritation to respiratory tract. Working solution expected to be low hazard for routine handling.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P337 + P313 If eye irritation persists: Get medical advice/attention.

P363 Wash contaminated clothing before reuse

P391 Collect spillage

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS</th>
<th>OHSA PEL</th>
<th>ACGIH TLV</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETIC ACID</td>
<td>64-19-7</td>
<td>25 mg/m³ TWA</td>
<td>10 ppm STEL</td>
<td>100%</td>
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</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye Contact: Immediately flush eyes with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get immediate medical attention.

Inhalation: If symptomatic, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion: If swallowed, DO NOT induce vomiting. Give large quantities of water to dilute stomach contents. One to two glasses. Do not attempt to neutralize acid with weak bases or antacids because the chemical reaction may extend the corrosive injury. Call a physician or poison control center. Never give anything by mouth to an unconscious person.

Skin Contact: Flush skin with plenty of water and wash with a non-alkaline skin cleaner. Wash contaminated clothes before reuse. Get medical attention if irritation develops.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Flammable. Use water spray, alcohol-resistant foam, dry chemicals or carbon dioxide.

5.2 Special Hazards arising from substance or mixture

Fire or excessive heat may cause production of hazardous decomposition products. Combustible material. Combustion Products: Carbon dioxide, carbon monoxide.

5.3 Advise for firefighters

Concentrate: Wear NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode and full protective clothing to prevent contact with skin and eyes. If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel. Use water to dilute spills and to flush them from sources of ignition
6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Review fire and explosion hazards and safety precautions before proceeding with cleanup. Use appropriate personal protective equipment. Avoid contact with skin and eyes. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharge. Stop the spillage. Dike the spill. Absorb spillage in inert material. Soak up with sawdust, sand, or other absorbent material. Remove non-usable solid material and/or contaminated soil for disposal in an approved and permitted landfill.

6.2 Environmental precautions
Prevent liquid from entering sewers, waterways or low areas. Discharge to sewer requires approval of permitting authority and may require pre-treatment. Contaminated surfaces should be cleaned using water.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid breathing mist or vapor at concentrations greater than exposure levels. Use only with adequate ventilation. Do not get in eyes, on skin, or on clothing. Store in a cool, dry, well ventilated area. Keep containers closed. Do not store or consume food, drink, or tobacco where they may become contaminated with this material. Destroy contaminated leather items such as belt, shoes, and other items that cannot be decontaminated. Keep away every possible source of ignition. Use non-sparking tools. Wash thoroughly after handling. Keep away from open flames, hot surfaces and sources of ignition.

7.2 Conditions for safe storage, including any incompatibles
Flammable materials should be stored in a separate safety storage cabinet or room. Do not store with incompatible materials. Do not store with strong acids. Keep containers closed. All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Triple rinse before disposal. Dispose of in a licensed facility.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters
See Section 3.

8.2 Exposure controls
Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Personal protective equipment

Eye Protection: If a full-face respirator is not worn, wear vapor-tight or goggles and full face shield where splashing of solutions are possible. Do not wear contact lenses when working with this substance. For the working solution safety glasses with side shield or goggles are recommended.

Respiratory Protection: If use conditions generate decomposition vapors or fumes; use a Multipurpose NIOSH approved respirator or type ABEK respirator cartridges.

Skin protection: Latex, rubber, or neoprene waterproof gloves are recommended.
Body protection: Rubber or plastic apron.

Respiratory protection: Local exhaust ventilation is recommended. Ventilation must be adequate to keep hazardous ingredients below their exposure limits, typically 10 air changes per hour.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance And Odor: Clear to light yellow liquid with a strong vinegar odor.
Solubility In Water: Complete
Boiling Point: > 118 °C/ 244°F
Flash Point: > 141.1°F
LEL: 4.0
UEL: 19.9
Vapor Pressure: 20.79 mm Hg @ 20º C
Specific Gravity: 1.05
Melting Point: Not applicable
Freezing Point: N.E.
Evaporation Rate: 0.97 (n-butyl acetate =1)
Vapor Density: 2.1 (air =1)
Percent Volatile: 100.0
Ph: < 2
Molecular Weight: Not applicable
Pounds Per Gallon: 8.7
V.O.C. is 1050 g/L or 100%, or 8.7 lb. /gal.

10. STABILITY AND REACTIVITY

10.1 Reactivity
Will not occur

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Not expected to occur.

10.4 Conditions to avoid
Heat, sparks, open flame, other ignition sources, and oxidizing conditions.

10.5 Incompatible Materials
Strong oxidizers, strong bases, and metals.

10.6 Decomposition Products
Excessive heating and/or incomplete combustion may produce carbon monoxide, hydrogen sulfide and other harmful gases or vapors including oxides and/or other compounds of sulfur and sodium.
11. TOXICOLOGICAL INFORMATION

11.1 Information of toxicological effects

**Component information**

**Acetic Acid 64-19-7**

**Acute toxicity:**
- Oral: LD50 (rats): 3,310 mg/kg
- Dermal: LD50 (Rabbit) – 4h – 11.4 mg/l
- Inhalation: LC50 (Mouse) – 1h – 5620 ppm
  - LC50 (Rat) – 4h -11.4 mg/l

Causes burns by all exposure routes.

**Skin irritation:** No data available

**Eye irritation:** Rabbit Corrosive to eyes

**Respiratory or skin sensitization** No data available

**Carcinogenicity/mutagenicity:** none

**Reproductive toxicity:** No data available

**Specific target organ toxicity – repeated exposure** – No data available

**Aspiration hazard** - No data available

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**
No data available

**Specific target organ toxicity** - single exposure
No data available

**Aspiration hazard**
No data available

12. ECOLOGICAL INFORMATION

**Component information**

**Acetic Acid 64-19-7**

**12.1 Toxicity**

- **Toxicity to fish**
  - LC0- Oncorhynchus mykiss (rainbow trout) - > 1,000 mg/l – 96h (OECD Test Guideline 203).

- **Toxicity to daphnia and other aquatic invertebrates**
  - LC50 – Daphnia magna (Water flea) – > 300.82mg/l – 48h (OECD Test Guideline 202).

**12.2 Persistence and degradability**
No data available

**12.3 Bioaccumulative potential**

- **Biodegradability**
  - aerobic – exposure time 30d
  - Result: 99% - Readily biodegradable
12.4 Mobility in soil
No data available

12.5 Result of PBT and vPvB assessment
Assessment not available as chemical assessment not required/not conducted

12.5 Result of PBT and vPvB assessment
Assessment not available as chemical assessment not required/not conducted

12.5 Other adverse effects
No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

14. TRANSPORT INFORMATION

DOT (US)

Limited Quantity Exception apply to this product, for “inner packagings not over 1.0L (0.3 gal) for liquids and 1.0 kg (2.2 lb) for solids”. 173.154 (b) (1). Each package must conform to the packaging requirements of Subpart B of Part 173 and may not exceed 30 kg (66 lb.) gross weight. For further information, consult the 49 CFR.

DOT Class: CONSUMER COMMODITY, ORM-D
Hazard Class: NOT APPLICABLE
UN No.: NOT APPLICABLE
Packing Group: NOT APPLICABLE
Guide No: NOT APPLICABLE
Ship Name: NOT APPLICABLE

For quantities greater than 0.3 gallon the following:

Ship Name: Acetic Acid Solution, with more than 80 percent acid, by mass.
Hazard Class: 8
Subsidiary Hazard: 3
UN No.: 2789
Packing Group: II
Guide No: 153
Labels: Corrosive (3)

15. REGULATORY INFORMATION

SARA 302 Components
The following components are subject to reporting:
Acetic Acid – RQ 5000 lbs.
SAFETY DATA SHEET

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313: None

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard

California Prop 65 Components
This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

TSCA
All ingredients in this finished product are listed on the EPA TSCA INVENTORY.
TSCA: All ingredients in this finished product are listed on the EPA TSCA INVENTORY.

SCAQMD Rule 443.1
Photochemically Reactive: No
Maximum Grams of VOC per Liter: 1050 gm/L
Vapor Pressure: 20.79 mmHg @ 20 °C

16. OTHER INFORMATION (HMIS)

Full text of H-statements referred to under sections 2 and 3.

Flammable liquid (Category 3) H226
Causes severe skin burns and eye damage (Skin Corr. 1A) H314
Serious Eye damage/eye irritation (Category 1) H318

HMIS RATING

Health: 3
Flammability: 2
Reactivity: 0
Protective: H

OTHER ADDITIONAL INFORMATION: The information contained herein is based on the data available to us and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for the injuries from the use of the product described herein.