

NFPA Ratings

| | |
|-----------------|---------------|
| Health | 0 |
| Flammability | 0 |
| Reactivity | 0 |
| Specific hazard | Not Available |

HMIS Ratings

| | |
|------------|---------------|
| Health | 0 |
| Fire | 0 |
| Reactivity | 0 |
| Personal | Not Available |

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | Weight % | CAS # | EINECS# / ELINCS# | Formula | Molecular Weight |
|-----------|----------|---------|-------------------|--|------------------|
| Glycerin | >99 | 56-81-5 | 200-289-5 | C ₃ H ₈ O ₃ | 92.09 g/mol |

4. FIRST-AID MEASURES

| | |
|-------------------|---|
| Eyes | Rinse with plenty of water for at least 15 minutes and seek medical attention if necessary. |
| Inhalation | Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary. |
| Skin | Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary. |
| Ingestion | Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary. |

5. FIREFIGHTING MEASURES

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|--|--|
| Suitable (and unsuitable) extinguishing media | Excess heat may cause vapors to ignite. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide on fires involving this product. |
| Special protective equipment and precautions for firefighters | Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots if necessary. |
| Specific hazards arising from the chemical | Emits fumes (oxides of carbon) under fire conditions. (See also Stability and Reactivity section). |

6. ACCIDENTAL RELEASE MEASURES

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|--|---|
| Personal precautions, protective equipment and emergency procedures | See section 8 for recommendations on the use of personal protective equipment. |
| Environmental precautions | Do not let product enter drains. Any release to the environment may be subject to federal/national or local reporting requirements. |
| Methods and materials for containment and cleaning up | Absorb spill with vermiculite or other inert absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations. |



7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with eyes. Avoid inhalation of vapor or mist. See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Ventilation and appropriate grounding of containers.

| Component | Exposure Limits | Basis | Entity |
|-----------|-------------------------|-------|--------|
| Glycerin | 15* mg/m ³ | PEL | OSHA |
| | 5** mg/m ³ | | |
| | 10*** mg/m ³ | TLV | ACGIH |

*Total dust

**Respirable fraction

***Mist

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

| | |
|-------------------|---|
| Eyes | Wear chemical safety glasses or goggles. |
| Inhalation | Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator. |
| Skin | Wear nitrile or rubber gloves and apron or lab coat. |
| Other | Not Available |

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

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|---|-----------------------------------|
| Appearance (physical state, color, etc.) | Clear liquid. |
| Odor | Not Available |
| Odor threshold | Not Available |
| pH | 5.5 - 8 |
| Melting point/freezing point | 20°C (68°F) |
| Initial boiling point and boiling range | 182°C (360°F) at 27 hPa (20 mmHg) |
| Flash point | 160°C (320°F) – closed cup |
| Evaporation rate | Not Available |
| Flammability (solid, gas) | Not Available |
| Upper/lower flammability or explosive limit | Lower - 0.9% |



| | |
|--|--|
| Vapor pressure | 0.0033 hPa (0.0025 mmHg) at 50°C (122°F) |
| Vapor density | 3.18 (air = 1) |
| Relative density | 1.25 g/mL |
| Solubility (ies) | Soluble |
| Partition coefficient: n-octanol/water | Not Available |
| Auto-ignition temperature | 370°C (698°F) |
| Decomposition temperature | Not Available |

10. STABILITY AND REACTIVITY

| | |
|---|-------------------------|
| Chemical Stability | Stable |
| Possibility of Hazardous Reactions | Will not occur. |
| Conditions to Avoid | Air, incompatibilities. |
| Incompatible Materials | Oxidizers, bases. |
| Hazardous Decomposition Products | Carbon oxides |

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

| | |
|--------------------|--|
| Skin | LD50 Dermal – rabbit - >10,000 mg/kg |
| Eyes | Eyes – rabbit – Mild eye irritation - 24 h |
| Respiratory | Not Available |
| Ingestion | LD50 Oral – rat – 12,600 mg/kg |

Carcinogenicity

| | |
|--------------|--|
| IARC | No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| ACGIH | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. |
| NTP | No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |
| OSHA | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |

Signs & Symptoms of Exposure

| | |
|-------------------|---|
| Eyes | May cause eye irritation. |
| Inhalation | Headache. |
| Skin | May be harmful if absorbed through skin. May cause skin irritation. |
| Ingestion | May be harmful if swallowed. Nausea, vomiting. |

| | |
|---------------------------------------|---|
| Chronic Toxicity | Kidney - Irregularities - Based on Human Evidence |
| Teratogenicity | Not Available |
| Mutagenicity | Not Available |
| Embryotoxicity | Not Available |
| Specific Target Organ Toxicity | Not Available |
| Reproductive Toxicity | Not Available |
| Respiratory/Skin Sensitization | Not Available |



12. ECOLOGICAL INFORMATION

Ecotoxicity

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|-----------------------------|---|
| Aquatic Vertebrate | LC50 – Pimephales promelas (fathead minnow) – 44,000 mg/l LC50 – Carassius auratus (goldfish) - >5,000 mg/l LC50 – Oncorhynchus mykiss (rainbow trout) – 67,500 mg/l – 96 hours |
| Aquatic Invertebrate | Not Available |
| Terrestrial | Not Available |

| | |
|--------------------------------------|---------------|
| Persistence and Degradability | Not Available |
| Bioaccumulative Potential | Not Available |
| Mobility in Soil | Not Available |
| PBT and vPvB Assessment | Not Available |
| Other Adverse Effects | Not Available |

13. DISPOSAL CONSIDERATIONS

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|----------------------------------|---|
| Waste Product or Residues | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue. |
| Product Containers | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container. |

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

| | |
|------------------|---------------------|
| US DOT | Not Dangerous Goods |
| TDG | Not Dangerous Goods |
| IMDG | Not Dangerous Goods |
| Marine Pollutant | No |
| IATA/ICAO | Not Dangerous Goods |

15. REGULATORY INFORMATION

| | |
|---------------------------|---|
| TSCA Inventory Status | All ingredients are listed on the TSCA inventory. |
| DSCL (EEC) | All ingredients are listed on the DSCL inventory. |
| California Proposition 65 | Not Listed |
| SARA 302 | No SARA Hazard |
| SARA 304 | No SARA Hazard |
| SARA 311 | Chronic Health Hazard |
| SARA 312 | Chronic Health Hazard |
| SARA 313 | No SARA Hazard |
| WHMIS Canada | Not WHMIS Listed |



16. OTHER INFORMATION

DISCLAIMER OF RESPONSIBILITY:

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

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