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Source MSDS issued 6 September 2007. Obtain the current SDS for the exact product.

MATERIAL SAFETY DATA SHEET

1 PRODUCT AND COMPANY IDENTIFICATION

Product Name: Crude Glycerin

Synonyms: 1,2,3-propanetriol

Empirical Formula: $C_3H_8O_3$

Molecular Weight: 92.09

Supplier identity, address and contact details removed.

Use the current supplier SDS for emergency information and shipment classification.

2 HAZARDS IDENTIFICATION

Emergency Overview

Physical State: Liquid
Color: Amber
Odor: Grain-like

CAUTION!
High mist concentrations may cause irritation of the respiratory tract.

Potential Health Effects

Inhalation: High mist concentrations may cause irritation.

Eye Contact: May cause transient irritation. Symptoms include burning, stinging and tearing.

Skin Contact: No specific hazard known. May cause transient irritation.

Ingestion: No specific hazard known.
Target Organ(s): Lung

OSHA Regulatory Status: Hazardous

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3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS- No.	Concentration
Glycerin	56-81-5	> 80 %
Water	7732-18-5	< 15 %
Sodium chloride	7647-14-5	< 5 %
Methanol	67-56-1	< 1 %

*Components not listed are nonhazardous or below reportable limits.

4 FIRST AID MEASURES

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention if symptoms persist.

Skin Contact: Wash with soap and water. Get medical attention if symptoms occur.

Ingestion: Seek medical advice.

5 FIRE-FIGHTING MEASURES

Extinguishing Media: Alcohol foam, dry chemical, carbon dioxide, water fog or material appropriate for surrounding fire.

Unsuitable Extinguishing Media: Water or foam may cause frothing.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing.

Unusual Fire & Explosion Hazards: None known

Hazardous Combustion Products: Carbon oxides, sodium oxides

6 ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate personal protective equipment (see Section 8).

Spill Cleanup Methods: Small Liquid Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Surfaces may become slippery when wet.
Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers or streams. Dike for later disposal.

7 HANDLING AND STORAGE

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Handling: Proper sanitation with food grade products is essential. Avoid breathing mist. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage: Keep containers closed. Drums: Protect against physical damage. Bulk storage: Store in standard flammable liquid storage tanks. To maintain product quality do not store in heat or direct sunlight.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	Source	Type	Exposure Limits	Notes
Glycerin mist	ACGIH	TWA	10 mg/m³	Irritation
Glycerin mist, (respirable fraction)	OSHA	PEL	5 mg/m³	--
Glycerin mist, (total dust)	OSHA	PEL	15 mg/m³	--
Glycerin mist, (respirable fraction)	OSHA	TWA	5 mg/m³	--
Glycerin mist, (total dust)	California	TWA	10 mg/m³	--
Glycerin mist, (respirable fraction)	North Carolina	TWA	5 mg/m³	--
Glycerin mist, (total dust)	North Carolina	TWA	10 mg/m³	--
Glycerin mist, (respirable fraction)	Oregon	TWA	5 mg/m³	--
Glycerin mist, (total dust)	Oregon	TWA	10 mg/m³	--
Glycerin mist	Alberta	TWA	10 mg/m³	--
Glycerin mist	British Columbia	TWA	10 mg/m³	--
Glycerin mist, (respirable fraction)	British Columbia	TWA	3 mg/m³	--
Glycerin mist	Ontario	TWA	10 mg/m³	--
Glycerin (mist)	Quebec	TWA	10 mg/m³	--
Glicerina, niebla	Mexico	TWA	10 mg/m³	--

Engineering Controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances; such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.

Respiratory Protection: Wear a NIOSH-approved respirator that has been selected by a technically qualified person for the specific work conditions where there may be potential for

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airborne exposure. If respirators are used, OSHA requires compliance with its respiratory protection program (29 CFR 1910.134).

Eye Protection: Wear safety glasses with side shields (or goggles).

Hand / Skin Protection: Wear gloves and protective clothing appropriate for the risk of exposure**.**

Hygiene Measures: Eye bath, washing facilities

9 PHYSICAL AND CHEMICAL PROPERTIES

Color: Amber
Odor: Grain-like
Odor Threshold: No data available
Physical State: Liquid
pH: No data available
Density: 1.22 – 1.24 @ 25°C (77°F)
Melting Point: 18°C (64°F) (Glycerin)
Boiling point: >130°C (266°F)
Freezing Point: < 2°C (36°F)
Flash Point: > 120°C (248°F)
Evaporation Rate: No data available
Vapor Pressure: No data available
Vapor Density (Air=1): 3.17
Specific Gravity: 1.22 – 1.24 @ 25°C (77°F)
Viscosity (25° C): No data available
Viscosity (40° C): No data available
Solubility in Water: Miscible
Partition Coefficient (n-Octanol/water): No data available
Decomposition Temperature: No data available

10 STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: None known

Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition Products: Carbon oxides, sodium oxides
Possibility of Hazardous Reactions: Will not occur.

11 TOXICOLOGICAL INFORMATION

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Specified Substances

Acute Toxicity

Chemical Name	Test Results
Glycerol	Oral LD_{50} (Rat): 12,600 mg/kg
Glycerol	Dermal LD_{50} (Rabbit): >10,000 mg/kg

Carcinogens: None

12 ECOLOGICAL INFORMATION

When released into the soil, this material is expected to readily biodegrade and is not expected to evaporate significantly. When released into water, this material is expected to readily biodegrade and is not expected to significantly bioaccumulate.

13 DISPOSAL CONSIDERATIONS

Disposal Methods: Dispose of waste and residues in accordance with local authority requirements. Incinerate.

Container: Since emptied containers retain product residue, follow label warnings even after container is emptied.

14 TRANSPORT INFORMATION

DOT: Not regulated

TDG: Not regulated

IATA: Not regulated

IMDG: Not regulated

Historical transport classification for this formulation.

Verify the current SDS for the actual shipment.

15 REGULATORY INFORMATION

Canadian Controlled Products Regulations: This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

WHMIS Classification: Noncontrolled

Mexican Dangerous Statement: None.

Inventory Status

This product listed on the following inventories: TSCA, DSL

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US Regulations
CERCLA Hazardous Substance List (40 CFR 302.4): None

SARA Title III
Section 302Extremely Hazardous Substance (40 CFR 355, Appendix A): None

Section 311/312 (40 CFR 370):

X	Acute (Immediate)		Chronic (Delayed)		Fire		Reactive		Pressure Generating

Section 313 Toxic Release Inventory (40 CFR 372): None

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40CFR 68.130): None

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): None

Drug Enforcement Act

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f) (2)): None

State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): None
Massachusetts Right-To-Know List: Glycerin mist
Minnesota Hazardous Substances List: Glycerin mist
New Jersey Right-To-Know List: None
Pennsylvania Right-To-Know List: 1,2,3-propanetriol
Rhode Island Right-To-Know List: Glycerin mist, methanol

16 OTHER INFORMATION

Hazard Ratings

	Health Hazard	Fire Hazard	Reactivity Hazard
HMIS	1	1	0

	Health Hazard	Fire Hazard	Reactivity Hazard	Special Hazard
NFPA	1	1	0	0

*- Chronic health effect; 0 – Minimal; 1 – Slight; 2 – Moderate; 3 – Serious; 4 – Severe

Revision Information: Updated to ANSI Format. Updated all sections of MSDS.

References:

1. Glycerol, Ariel WebInsight Global Regulatory Database

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2. Glycerin, supplier MSDS, August 05, 2002.
3. Glycerol, CCRIS, Lasted revision date 20051130
4. Glycerin, HSDB, Hazardous Substances Databank Number: 492, 1994
5. Glycerol, NTP, Catalog ID number: 000006
6. Glycerol, RTECS, RTECS Number MA8050000, 200608.
7. Grant, W.M. Toxicology of the Eye. 1986, p. 463.

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