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**** MATERIAL SAFETY DATA SHEET ****

Glycerine
10440

JUL 31 2000

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Glycerine

Catalog Numbers:

S71228, S71229, S74606, S74606-1, BP229 1, BP229 4, BP229-1, BP229-4,
BP2291, BP2294, G153 1, G153 4, G153-1, G153-4, G1531, G1534, G30 20,
G30 200, G30 4, G31 1, G31 20, G31 4, G31 500, G31-1, G31-20, G31-4,
G31-500, G311, G3120, G31200, G314, G31500, G31500001, G31500LC, G33 1,
G33 20, G33 200, G33 4, G33 500, G33-1, G33-20, G33-200, G33-4, G33-500,
G331, G3320, G33200, G3320LC, G334, G33500, NC9484773, NC9508460, NC9520779
S746061, ZZG332015

Synonyms:

Glycerol; 1,2,3-Propanetriol; Glyceritol; Glycic Alcohol;
1,2,3-Trihydroxypropane; 1,2,3-Propanetriol

Company Identification: Fisher Scientific
1 Reagent Lane

Fairlawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
56-81-5	Glycerine	100.0	200-289-5

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: clear.

Caution! This is expected to be a low hazard for usual industrial handling. May cause eye and skin irritation. May cause respiratory and digestive tract irritation.

Target Organs: None known.

Potential Health Effects

Eye:

May cause eye irritation.

Skin:

May cause skin irritation. Low hazard for usual industrial handling.

Ingestion:

Ingestion of large amounts may cause gastrointestinal irritation. Low hazard for usual industrial handling. May cause headache.

Inhalation:

Low hazard for usual industrial handling. Inhalation of a mist of this material may cause respiratory tract irritation.

Chronic:

No information found.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

Skin:

Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion:

Never give anything by mouth to an unconscious person. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Get medical aid if irritation or symptoms occur.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Treat symptomatically and

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.

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Extinguishing Media:

Use water spray to cool fire-exposed containers. Use agent most appropriate to extinguish fire. In case of fire use water spray, dry chemical, carbon dioxide, or appropriate foam.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Wash hands before eating. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. No special precautions indicated.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Glycerine	(10) mg/m3 (total)	no established RELs - see Appendix D	total dust: 15 mg/m3 TWA; respirable fraction: 5 mg/m3 TWA

OSHA Vacated PELs:

Glycerine:

total dust: 10 mg/m3 TWA; respirable fraction: 5 mg/m3 TWA

Personal Protective Equipment

Eyes:

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.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State:

Liquid

Appearance:

clear

Odor:

faint odor

pH:

Not available.

Vapor Pressure:

.0025 mm Hg @ 5

Vapor Density:

3.17 (H2O=1)

Evaporation Rate:

Not available.

Viscosity:

Not available.

Boiling Point:

290 deg C

Freezing/Melting Point:

20 deg F

Autoignition Temperature:

400 deg C (752.00 deg F)

Flash Point:

193 deg C (379.40 deg F)

NFPA Rating:

(est.) Health: 0; Flammability: 1; Reactivity: 0

Explosion Limits, Lower:

1.1

Upper:

Not available.

Decomposition Temperature:

290 C

Solubility:

Miscible in water. Insol. in chloroform,

Specific Gravity/Density:

1.4746

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Molecular Formula: C3H8O3
Molecular Weight: 92.0542

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability: Stable.
Conditions to Avoid: Incompatible materials, ignition sources, excess heat.
Incompatibilities with Other Materials: Not available.
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: Will not occur.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#: CAS# 56-81-5: MA8050000
LD50/LC50: CAS# 56-81-5: Oral, mouse: LD50 = 4090 mg/kg; Oral, rabbit: LD50 = 27 gm/kg; Oral, rat: LD50 = 12600 mg/kg.
Carcinogenicity: Glycerine - Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.
Mutagenicity: No information available.
Other Studies: No data available.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity: Cas# 56-81-5:
LC50 (96 Hr.) rainbow trout = 50-67 mg/L; 12 degrees C
LC50 (96 Hr.) goldfish = >5000 mg/L
Environmental Fate: No information available.
Physical/Chemical: No information available.
Other: Not available.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT: No information available
Canadian TDG: No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
TSCA: CAS# 56-81-5 is listed on the TSCA inventory.
Health & Safety Reporting List: None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules: None of the chemicals in this product are under a Chemical Test Rule.
Section 12b: None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule: None of the chemicals in this material have a SNUR under TSCA.
SARA: Section 302 (RQ): None of the chemicals in this material have an RQ.
Section 302 (TPQ): None of the chemicals in this product have a TPQ.
SARA Codes: CAS # 56-81-5: chronic.
Section 313: No chemicals are reportable under Section 313.
Clean Air Act: This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone Depletors.

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This material does not contain any Class 2 Ozone depletors.
Clean Water Act: None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

STATE: Glycerine can be found on the following state right to know lists:
Pennsylvania, Minnesota, Massachusetts.
California No Significant Risk Level:

None of the chemicals in this product are listed.
European/International Regulations: European Labeling in Accordance with EC Directives
Hazard Symbols: Not available.
Risk Phrases: Safety Phrases:
WGK (Water Danger/Protection): CAS# 56-81-5: 0
Canada:

CAS# 56-81-5 is listed on Canada's DSL/NDSL List.
This product does not have a WHMIS classification.
CAS# 56-81-5 is not listed on Canada's Ingredient Disclosure List.
Exposure Limits: CAS# 56-81-5: OEL-AUSTRALIA:TWA 10 mg/m3
OEL-BELGIUM:TWA 10 mg/m3
OEL-FINLAND:TWA 20 mg/m3
OEL-FRANCE:TWA 10 mg/m3
OEL-THE NETHERLANDS:TWA 10 mg/m3
OEL-UNITED KINGDOM:TWA 10 mg/m3
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 7/20/1999 Revision #0 Date: Original.

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.