



PT ETI FIRE SYSTEMS
Jl Magelang – Kopeng, KM 11
Tegalrejo, Magelang 56192
Central Java - Indonesia.

MATERIALS SAFETY DATA SHEET
ORIGINAL ISSUE : 26 April 2010
RE-ISSUED : 20 March 2015
DOCUMENT : MSDS 004B
GLYCERIN

PRODUCT IDENTIFICATION

SUBSTANCE – GLYCERIN used in PART VPINDBARGL13.7
DESCRIPTION: Pressure Indicator 13.7 Liquid

The ETI Pressure indicator is fitted to ETI foam valves and to some loss of pressure Actuators. The indicators are filled with Glycerin to make the indicator more resistant to vibration and shock.



RESPONSIBLE PARTY

Company Name:PT ETI FIRE SYSTEMS
Address: Jl Magelang – Kopeng, KM 11
City: MAGELANG
State: JAWA TENGAH
POST 56192:
Country: INDONESIA
Emergency Phone Num:+62 293 314 8990

CONTRACTOR IDENTIFICATION

Company Name: NOT APPLICABLE
Address:
Box:
City:
State:
POST:
Country:

COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name: Glycerin.
Chemical Formula: $C_3H_5(OH)_3$.
CAS No.: 56-81-5.
Concentration, Wt %: 100%.
Quantity of in each indicator 25ml net.



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HAZARDS IDENTIFICATION

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to kidneys. Repeated or prolonged exposure to the substance can produce target organs damage.

PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance: Liquid. (Viscous (Syrupy) liquid.) p. 3

Odor: Mild **Taste:** Sweet. **Molecular Weight:** 92.09 g/mole

Color: Clear Colorless. **pH (1% soln/water):** Not available. **Boiling Point:** 290°C (554°F)

Melting Point: 19°C (66.2°F) **Critical Temperature:** Not available. **Specific Gravity:** 1.2636 (Water = 1)

Vapor Pressure: 0 kPa (@ 20°C) **Vapor Density:** 3.17 (Air = 1) **Volatility:** Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: The product is more soluble in water; log(oil/water) = -1.8

Ionicity (in Water): Not available. **Dispersion Properties:** See solubility in water, acetone.

Solubility:

Miscible in cold water, hot water and alcohol. Partially soluble in acetone. Very slightly soluble in diethyl ether (ethyl ether). Limited solubility in ethyl acetate. Insoluble in carbon tetrachloride, benzene, chloroform, petroleum ethers, and oils

TOXICOLOGY BY EXPOSURE: Routes of Entry: Absorbed through skin. Eye contact.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Low hazard for normal industrial handling or normal workplace conditions.

Skin: May cause skin irritation. May be absorbed through skin

Eyes: May cause eye irritation with stinging, redness, burning sensation, and tearing, but no eye injury.

Ingestion: Low hazard. Low toxicity except with very large doses. When large doses are ingested, it can cause gastrointestinal tract irritation with thirst (dehydration), nausea or vomiting diarrhea. It may also affect behavior/central nervous system/nervous system (central nervous system depression, general anesthetic, headache, dizziness,

confusion, insomnia, toxic psychosis, muscle weakness, paralysis/convulsions), urinary system/kidneys (renal failure,

hemoglobinuria), cardiovascular system (cardiac arrhythmias), liver. It may also cause elevated blood sugar.

Inhalation: Due to low vapor pressure, inhalation of the vapors at room temperature is unlikely. Inhalation of mist may cause respiratory tract irritation.

Chronic Potential Health Effects:

Ingestion: Prolonged or repeated ingestion may affect the blood (hemolysis, changes in white blood cell count), endocrine system (changes in adrenal weight), respiratory system, and may cause kidney injury.



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FOR ENVIRONMENT:

Ecotoxicity: Ecotoxicity in water (LC50): 58.5 ppm 96 hours [Trout].

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

FIRST AID MEASURES

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Skin Contact:

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

Serious Skin Contact: Not available.

Inhalation:

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

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

FIRE & EXPLOSION DATA

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 370°C (698°F) TO 392 C (739 F).

Flash Points:

CLOSED CUP: 160°C (320°F). OPEN CUP: 177°C (350.6°F) TO 199°C (390 F)

Flammable Limits: LOWER: 0.9%

Products of Combustion: These products are carbon oxides (CO, CO₂), irritating and toxic fumes.

Fire Hazards in Presence of Various Substances:

Slightly flammable to flammable in presence of open flames and sparks, of heat, of oxidizing materials.

Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available.

Risks of explosion of the product in presence of static discharge: Not available.

Explosive in presence of oxidizing materials.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards:

Glycerin is incompatible with strong oxidizers such as chromium trioxide, potassium chlorate, or potassium.

ACCIDENTAL RELEASE MEASURES

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.



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HANDLING AND STORAGE

Precautions:

ETI pressure indicators are supplied standard with glycerine filling complete. When shipped air via freight, the indicators may leak due to pressure changes in flight. In these cases, the indicators can be supplied unfilled and the glycerine can be supplied in a separate bottle of no more than 1 litre. The user may then fill the indicators before use.

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Hygroscopic

EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

SUPPLEMENTAL SAFETY AND HEALTH

Carbon Dioxide is stored at very high pressures and correct safety procedures should be used.

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STABILITY AND REACTIVITY DATA

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Avoid contact with incompatible materials, excess heat and ignition, sources, moisture.

Incompatibility with various substances: Highly reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Hygroscopic.

Glycerin is incompatible with strong oxidizers such as chromium trioxide, potassium chlorate, or potassium permanganate.

Glycerin may react violently with acetic anhydride, aniline and nitrobenzene, chromic oxide, lead oxide and fluorine,

phosphorous triiodide, ethylene oxide and heat, silver perchlorate, sodium peroxide, sodium hydride.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

DISPOSAL CONSIDERATIONS

Refer to local authority regulations if disposal is required.

AMMENDMENT RECORD

Document MSDS 004B -- RE-ISSUED

DISCLAIMER

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