

Safety Data Sheet

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

In case of ingestion

Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

5. FIRE-FIGHTING MEASURES

Suitable fire-extinguishing media

Use extinguishing media suitable for surrounding area.

Not suitable extinguishing media

There is no restriction on the type of extinguisher which may be used.

Specific hazards arising from the chemical

Development of hazardous combustion gases or vapor possible in the event of fire.

Special protective actions for fire fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Fight fire from a safe distance, with adequate cover.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment, do not breathe gas/mist/vapour/spray.

Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Cut off the source of the leak as much as possible.

Keep leaks in a ventilated place.

Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.

Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.

7. HANDLING AND STORAGE

Handling

Technical measures

Use local exhaust ventilation in case of production of fume or mist.

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Safe handling advice

Handling is performed in a well ventilated place.

Avoid contact with eyes.

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Storage

Suitable storage conditions

Keep away from heat/sparks/open flames/ hot surfaces.

Keep containers tightly closed.

Keep containers in a dry, cool and well-ventilated place.

Keep away from heat/sparks/open flames/hot surfaces.

Store away from incompatible materials and foodstuff containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH (TLV)	Singapore
Glycerol (56-81-5)	Not established	10 mg/m ³ PEL (mist)
Diethylene Glycol (111-46-6)	Not established	Not established

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Ensure that eyewash stations and safety showers are close to the workstation location.

Set up emergency exit and necessary risk-elimination area.

Handle in accordance with good industrial hygiene and safety practice.

Individual protection measures

Respiratory protection

Consult with a health and safety professional for specific respirators appropriate for your use.

Hand protection

Wear appropriate chemical resistant gloves.

Eye protection

Wear coverall, chemical goggles and face shield when handling.

Skin and body protection

To prevent any contact, wear impervious clothing such as gloves, apron, boots, or whole body suits made from neoprene, as appropriate.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State	Liquid
Color	Yellow
Odor	No information available
Odor threshold	No information available
pH	7-9
Melting point	No information available
Boiling point	No information available
Flash point	Not flammable
Evaporation rate	No information available
Flammability(Solid,Gas)	Not flammable
Flammability or explosive limits	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	No information available
Solubility(ies)	No information available
Partition coefficient: n-octanol/water	No information available

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Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	3-5mPa·s

10. STABILITY AND REACTIVITY

Chemical stability	Stable under proper operation and storage conditions.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide. Oxidants, alkali metals, alkaline earth metals and aluminum.
Hazardous decomposition products	<p>Contact with incompatible substances can cause decomposition or other chemical reactions.</p> <p>In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen. In contact with oxidants causes severe reactions, and may cause a fire or explosion.</p> <p>Under normal conditions of storage and use, hazardous decomposition products should not be produced.</p>

11. TOXICOLOGICAL INFORMATION

Acute toxicity (Oral)	Glycerol (56-81-5)
	LD ₅₀ Rat 12,600 mg/kg
Acute toxicity (Dermal)	Glycerol (56-81-5)
	LD ₅₀ Rabbit >10,000 mg/kg
Acute toxicity (Inhalation : Gases)	Based on available data, the classification criteria are not met
Acute toxicity (Inhalation : Vapours)	Based on available data, the classification criteria are not met
Acute toxicity (Inhalation : dust/mist)	Based on available data, the classification criteria are not met
Skin corrosion/ Irritation	Based on available data, the classification criteria are not met
Serious eye damage/ irritation	Based on available data, the classification criteria are not met
Respiratory Sensitization	Based on available data, the classification criteria are not met
Skin Sensitization	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Carcinogenicity	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
Reproductive toxicity, effects on or via lactation	Based on available data, the classification criteria are not met
Specific target organ Toxicity – Single Exposure	Based on available data, the classification criteria are not met
Specific target organ toxicity – Repeated Exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met

12. ECOLOGICAL INFORMATION

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Hazardous to the Aquatic Environment – Glycerol (56-81-5)
 Acute Toxicity LC₅₀ Fish 885mg/L(96h)
 Hazardous to the Aquatic Environment – No information available.
 Chronic Toxicity
 Hazardous to the Ozone layer No information available.

13. DISPOSAL CONSIDERATIONS

Residual Waste Dispose of waste in accordance with local, state and federal regulations. Recommend the use of incineration disposal.
 Contaminated Container and Packaging Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire.

14. TRANSPORT INFORMATION

International regulations
 IMDG Not regulated as dangerous goods for transport.
 IATA Not regulated as dangerous goods for transport.
 ADR Not regulated as dangerous goods for transport.

15. REGULATORY INFORMATION

No main regulation
 Component Analysis – Inventory
 Glycerol (56-81-5)

TSCA – United States	ENCS – Japan	IECSC – China	DSL – Canada	PICCS – Philippines	AICS – Australia	EINECS/ELINCS – European Union	NZIoC – New Zealand
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Pigment Yellow (68516-73-4)

TSCA – United States	ENCS – Japan	IECSC – China	DSL – Canada	PICCS – Philippines	AICS – Australia	EINECS/ELINCS – European Union	NZIoC – New Zealand
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

16. OTHER INFORMATION

Literature References 1) SDS of raw material
 2) IPCS: The International Chemical Safety Cards (ICSC)
 Other data The information suggested in this Safety Data Sheet does not comprehend everything and should be adopted only as a guide. The accuracy of the information and recommendations suggested herein are credible. However the company makes no warranty regarding such information and recommendations and disclaims all liability for reliance thereon.