MATERIAL SAFETY DATA SHEET(MSDS)- DIPROPYLENE GLYCOL

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

Trade name : DIPROPYLENE GLYCOL

CAS Number: : 25265-71-8

Chemical Name :1,1-Oxydi-2-Propanol

Synonyms :Methyl-2(Methyl-2) Oxybispropanol, DPG, 2,2-Dihydroxyisopropyl Ether, 1,1-Oxydi-2-Propanol

COMPANY IDENTIFICATION

Supplier: **Pon Pure Chemicals Group**

CHENNAI, TAMILNADU, INDIA

24 Hour Health Emergency (91) 8939878447

(91) 9444038694

Transportation Emergency Phone (91) 8939768680

Company Name	Place	EMERGENCY TELEPHONE NUMBER
Pon Pure Chemicals Group	India	Day Emergency – 044-26161803-26161809

2. HAZARDS IDENTIFICATION

GHS-Classification

Not a dangerous substance according to GHS.

GHS-Labeling

Not a dangerous substance according to GHS.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Substance

Hazardous ingredients

Chemical Name	CAS-No.	Concentration
Dipropylene Glycol	25265-71-8	>= 99.5 %

4. FIRST AID MEASURES

If Inhaled

Not expected to present a significant inhalation hazard under anticipated conditions of normal use. Avoid inhalation of Hot vapours of extremely high concentrations of aerosols. Remove to fresh air. Incase of inhalation of aerosol/mist consult a physician if necessary

In case of skin Contact

Wash skin thoroughly with mild soap and water.

Flush eyes with water thoroughly and continuously for 15 minutes.

In case of eye contact

Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists, consult a specialist.

If swallowed

Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

Notes to physician

Symptoms

High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure).

Hazards Treatment

This product is of low acute toxicity.

May cause irritation of the eyes, skin and mucous membranes. Hot vapors may cause lung damage. Treat symptomatically.

Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	SMALL FIRE: Use dry chemicals, CO2, water spray or alcohol- resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam.
Unsuitable extinguishing media	:	Do not use solid water stream.
Specific hazards during fire fighting	:	Heat from fire can generate flammable vapor.When mixed with air and exposed to ignition source.

	Vapors may be heavier than air. May travel long distances along the ground before igniting and flashing back to vapor source. Fine sprays/mists may be combustible at temperatures below normal flash point. Fight fire from a safe distance/protected location. Heat may build enough pressure to rupture closed containers/spreading fire/increasing risk of burns/injuries. Use water spray/fog for cooling. Avoid frothing/steam explosion. Burning liquid may float on water. Although water soluble, may not be practical to extinguish fire by water dilution. Notify authorities immediately if liquid enters sewer/public waters.
Special protective equipment for fire-fighters :	Wear positive pressure self-contained breathing apparatus(SCBA).Structural firefighters protective clothing will only provide limited protection.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	: Use personal protective equipment. Clean-up to be performed only by trained and properly equipped personnel.
Environmental precautions	: Try to prevent the material from entering drains or water courses.
Methods for cleaning up	: Extinguish all ignition sources. Stop release; prevent flow to sewers/public waters. Notify fire and environmental authorities. Impound/recover large land spill; soak up small spill with inert solids. Soak up small spills with inert solids. Use suitable disposal containers. On water, material is soluble and may float or sink. Contain/collect rapidly to minimize dispersion. Disperse

residue to reduce aquatic harm. Report per regulatory requirements.

7. HANDLING AND STORAGE

Handling

Advice on safe handling	:	Handle empty containers with care - residue can burn if heated. Empty containers should be thoroughly rinsed with copious amounts of clean water. The rinse water can be used for makeup water for any necessary dilution of the concentrated product before use, or it can be properly discarded.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.

Storage

Requirements for storage areas and containers	:	Keep container tightly closed when not in use. Protect from moisture. Store away from heat. Material can attack some forms of plastics. Do not store together with oxidizing and self-igniting products.
Advice on common storage	:	Carbon/Mild steel with suitable internal coating, or stainless steel
Other data	:	No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Consult local authorities for acceptable exposure limits.

Engineering measures

No special ventilation is recommended under anticipated conditions of normal use beyond that needed for normal comfort control.

Personal protective equipment

Hand protection	:	Wear chemical resistant gloves such as: Butyl rubber or Nitrile.
Eye protection	:	Safety glasses with side-shields Use splash goggles when eye contact due to splashing or spraying liquid is possible.
Skin and body protection	:	No special clothing/skin protection equipment is recommended under normal conditions of anticipated use. Where use can result in skin contact, practice good personal hygiene.
Hygiene measures	:	Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	:	liquid at 20 °C (1,013.25 hPa)
Color	:	Clear, colorless.
Odor	:	Little or no odor.

Safety data

Flash point	:	128 - 132 °C at 988.80 hPa (741.66 mm Hg)

Lower explosion limit	:	No Data Available.
Upper explosion limit	:	No Data Available.
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Autoignition temperature	:	327 - 337 °C at 989.60 - 1001.80 hPa
Molecular Weight	:	134.17 g/mol
pH	:	Not applicable.
Melting point/range	:	< -20 °C
Boiling point/boiling range	:	227 °C at 983.60 hPa
Vapor pressure	:	0.013 hPa at 25 °C
Density	:	1.02 g/cm3 at 20 °C (Water = 1.0 at 4°C (39.2°F))
Water solubility	:	at 20 °C Miscible
Partition coefficient: n-octanol/water	:	log Pow: -0.462 at 21.7 °C
Viscosity, kinematic	:	118 mm2/s at 20 °C , 32 mm2/s at 40 °C
Relative vapor density	:	~4.6 (Air = 1.0 at 15 - 20°C/59 - 68°F)
Surface tension	:	71.4 mN/m 1.01g/l at 22 °C
Other Information	:	Pour point: -4.4°C (-40°F).

10. STABILITY AND REACTIVITY

Conditions to avoid	:	High temperatures, oxidizing conditions.
Materials to avoid	:	Strong acids, Isocyanates. Strong oxidizing agents.
Hazardous decomposition products	:	Carbon Monoxide and other toxic vapors.

Thermal decomposition	: Thermal decomposition may produce carbon monoxide and other toxic vapors.
Hazardous reactions	: Not expected to occur. This material is stable when properly handled and stored.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Acute oral toxicity

Dipropylene Glycol : LD50 Oral: > 5,000 mg/kg
Species: rat
Ingestion of high doses may cause discomfort and irritation of the gastrointestinal tract and CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse,coma and death in cases of severe over-exposure).

Acute inhalation toxicity : LC50 (Inhl): > 2.34 mg/l, Exposure time: 4 HOURS
Species: rat
Vapors may cause irritation of the eyes, nose and throat as well as CNS depression (fatigue, dizziness, loss of concentration, with collapse, coma and death possible in cases of severe overexposure). High vapor concentrations may be irritating to the upper respiratory tract.

Acute dermal toxicity : LD50 Dermal: > 5,010 mg/kgSpecies: rabbit
Repeated exposure may cause cracking and drying due to the extraction of oils.

Skin corrosion/irritation

Skin irritation : Not a skin irritant.

Serious eye damage/eye irritation

Eye irritation : No eye irritation

Respiratory or skin sensitization

Sensitization : Not sensitizing

Germ cell mutagenicity

: Negative for genotoxicity using both in vitro and in vivo

Carcinogenicity

Remarks : Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

Effects on fertility

Conclusion : Animal testing did not show any effects on fertility.

Effects on Development

Conclusion : Results from animal studies demonstrate that this material is not a teratogen, nor is it toxic to the developing embyro or fetus at non-maternally toxic doses.

Target Organ Systemic Toxicant - Repeated exposure

Dipropylene Glycol : Effects noted in repeated-exposure studies in rodents reveal target organ effects specific to rodents and are not relevant to human health or occurred at very high dose levels of low relevance to human exposures.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Dipropylene Glycol	:	LC50: > 1,000 mg/l Exposure time: 96 HOUR Species: Oryzias latipes (Orange-red killifish) Read-across to structural analogue,Tripropylene Glycol
Toxicity to daphnia	:	EC50: > 100 mg/l
Toxicity to bacteria		Exposure time: 72 HOUR Species: Desmodesmus subspicatus (green algae)
Toxicity to fish (Chronic toxicity)	:	EC10: > 1,000 mg/l Exposure time: 18 HOUR Species: Pseudomonas putida

		QSAR (Quantitative structure-activity relationship) based calculation predicts low chronic toxicity.
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	No Data Available.
Elimination information (persistence and degradability) Bioaccumulation	:	Bioconcentration factor (BCF): < 5 Not expected to bioaccumulate in aquatic organisms.
Surface tension	:	71.4 mN/m 1.01g/l at 22 °C
Distribution among environmental compartments	:	Environmental releases of propylene glycol will tend to partition to water and soil, with little potential for evaporation.
Additional advice Environmental fate and pathways Biodegradability	:	No additional information available.

Additional ecological information

Dipropylene Glycol	:	This material is expected to be non-hazardous to aquatic species. Readily biodegradable in aerobic conditions. This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

13. DISPOSAL CONSIDERATIONS

Product : Fire residues and contaminated fire extinguishing water must

Do not contaminate ponds, waterways or ditches with chemical or used container. Comply with federal, state, or local regulations for disposal.

14.TRANSPORT INFORMATION

IMDG

UN number : 5027

Description of the goods : DIPROPYLENE GLYCOL,

Class : 0

Marine pollutant : no

15. REGULATORY INFORMATION

Notification status

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
Philippines	PICCS
United States of America	TSCA

16. OTHER INFORMATION

Disclaimer

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