



SUPREME PETRO CHEMICALS

IMPORTER & DISTRIBUTOR OF INDUSTRIAL CHEMICALS ·
SINCE 1997

No. 145, 1st Floor, Raja Muthiah Road,
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admin@supremepetrochemicals.com

SAFETY DATA SHEET (SDS)

Glycerol Mono Stearate (GMS)

SDS

REV 3.1
29 JULY 2026
GHS REV.11 (2025)

CAS **31566-31-1**

EC **See ECHA / supplier SDS**

SIGNAL WORD **DANGER**

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

Product Name	Glycerol Mono Stearate (GMS)
Product Type	Monostearin — industrial chemical
Chemical Family	Glycerol ester / Monostearin
CAS No.	31566-31-1
EC No.	See ECHA / supplier SDS
Intended Use	Emulsifier, lubricant, and processing aid in food-grade, pharmaceutical, cosmetic, and industrial formulations.
Restrictions on Use	Industrial / professional use only. Confirm suitability for final application before use.
Supplier	Supreme Petro Chemicals
Address	No. 145, 1st Floor, Raja Muthiah Road, Periyamet, Chennai – 600003, India
Emergency Contact	Sanketh — +91 86087 80096 · Sudarshan — +91 81979 47045
Email	admin@supremepetrochemicals.com
Product Page	https://www.supremepetrochemicals.com/products/glycerol-mono-stearate-gms
SDS Revision	July 2026
SDS Version	3.1

SECTION 2 HAZARD IDENTIFICATION

Not classified as hazardous under UN GHS Rev.11 (2025) / EU CLP / OSHA HCS based on available data.



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GHS Classification Not classified as hazardous according to available PubChem GHS notifications and reviewed supplier data.

Signal Word Not classified

GHS Pictograms None — substance is not classified as hazardous.

HAZARD STATEMENTS

- None — substance is not classified as hazardous under GHS.

PRECAUTIONARY — PREVENTION

- P260 — Do not breathe dust or spray.
- P271 — Use only outdoors or in a well-ventilated area when handling as dust or melt.
- P273 — Avoid release to the environment.
- P280 — Wear protective gloves / eye protection as appropriate for handling conditions.

PRECAUTIONARY — RESPONSE / STORAGE / DISPOSAL

- P304+P340 — IF INHALED (dust): Remove person to fresh air and keep comfortable for breathing.
- P312 — Call a POISON CENTER or doctor if you feel unwell.
- P501 — Dispose of contents / container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	EC NO.	% W/W	GHS CLASSIFICATION
Glycerol Mono Stearate (GMS)	31566-31-1	See ECHA / supplier SDS	100	Not classified as hazardous according to available PubChem GHS notifications.

Percentages are by weight. Full text of H-statements listed in Section 16. No H-statements apply — substance is not classified.

SECTION 4 FIRST AID MEASURES

Inhalation Remove person to fresh air. If dust or melt vapour has been inhaled and symptoms persist (cough, irritation), seek medical attention.

Skin Contact Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Seek medical attention if irritation or symptoms persist.



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Eye Contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.
Ingestion	Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek medical advice if large quantities have been ingested or symptoms occur.
Note to Physician	Treat symptomatically based on exposure route and clinical presentation. No specific antidote known.

SECTION 5 FIREFIGHTING MEASURES

Suitable Extinguishing Media	Water spray, dry chemical powder, CO ₂ , or foam appropriate for surrounding fire.
Unsuitable Media	Direct high-pressure water jet where it may spread burning material.
Specific Hazards	Combustible solid. Flash point ~200°C. Dust or fine particulate may form a combustible atmosphere. Heated containers may rupture. Decomposition may yield carbon oxides and irritating or toxic fumes.
Protective Equipment	Wear full protective clothing and self-contained breathing apparatus (SCBA). Keep upwind.
Special Procedures	Evacuate non-essential personnel. Prevent contaminated firefighting run-off from entering drains and waterways. Cool exposed containers with water spray.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear appropriate PPE as described in Section 8. Avoid generating dust. Prevent slipping on spilled solid material. Isolate area from non-essential personnel.
Environmental Precautions	Prevent entry into drains, sewers, soil, and watercourses.
Containment / Clean-up	Collect spilled solid / molten material into labelled, compatible containers for disposal. Avoid generating dust. Clean residues with suitable absorbent material or by vacuuming (explosion-proof equipment if dust is present).
Reference to Sections	See Section 8 for PPE, Section 13 for disposal, and Section 15 for regulatory information.



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SECTION 7 HANDLING AND STORAGE

Handling Precautions	Use adequate ventilation, especially when handling as powder or melt. Avoid contact with eyes and skin. Keep away from ignition sources when in molten state. Use explosion-proof equipment where dust may accumulate.
Hygiene	Wash hands thoroughly after handling. Remove contaminated clothing before reuse. Do not eat, drink, or smoke when using.
Storage Conditions	Store in original, tightly closed compatible containers in a cool, dry, well-ventilated area away from direct sunlight.
Storage Temperature	Ambient temperature (below 30°C preferred to prevent caking or partial melting). Keep away from heat sources.
Incompatible Materials	Strong oxidising agents (nitric acid, permanganates, peroxides). Avoid contact with concentrated acids and halogens.
Segregation	Segregate from food, drink, animal feed, and incompatible chemicals.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit	No specific OEL established for GMS (CAS 31566–31–1) under OSHA, NIOSH, ACGIH, EU, or Indian regulations as of June 2026. Apply ALARA / good industrial hygiene practice. Confirm with local/regional authority.
Engineering Controls	Use local exhaust ventilation or enclosed handling systems when generating dust or melt vapour. Ensure adequate general ventilation.
Respiratory Protection	Not normally required under good ventilation conditions. If dust or melt vapour is generated above ALARA levels, use a NIOSH/EN P95/P100 or equivalent particulate respirator. Use SCBA for emergencies.
Hand / Eye / Skin	Hand: chemical-resistant gloves (nitrile, neoprene, or equivalent) when handling hot melt or in repeated contact. Eye/Face: chemical splash goggles per EN 166 / ANSI Z87.1; add face shield for molten material handling. Body: chemical-resistant apron / protective clothing. Safety footwear. Eyewash station and safety shower should be accessible where handling occurs.



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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to cream-coloured waxy solid, flakes, beads, or powder at ambient temperature.
Odour	Faint fatty / waxy odour.
Odour Threshold	Not established.
pH	Not applicable (solid). Aqueous dispersion: ~5–7 (indicative; verify from supplier COA/SDS).
Melting / Freezing Point	~54–58°C (literature range; commercial grades vary — verify with supplier COA).
Boiling Point / Range	Decomposes before boiling at atmospheric pressure; thermal decomposition above ~200°C.
Flash Point	~185–210°C (closed cup; literature range — verify with supplier SDS).
Auto-ignition Temperature	~300°C (indicative; verify with supplier).
Flammability Limits	Not established for solid/wax form. Dust clouds may form explosive mixtures.
Vapour Pressure	Negligible at ambient temperature (<0.01 hPa at 20°C).
Vapour Density (air = 1)	Not applicable at ambient temperature (low-volatility solid).
Relative Density	~0.97 g/cm ³ at 20°C (indicative; verify with supplier).
Solubility in Water	Insoluble in cold water; partially dispersible in hot water. Soluble in ethanol, chloroform, ether, and hot oils.
Log Pow (Partition Coeff.)	~8 (highly lipophilic; verify with supplier for grade-specific value).
Evaporation Rate	Negligible (low-volatility solid).
Viscosity	Not applicable at ambient temperature (solid). Molten form: viscous liquid; consult supplier for melt viscosity data.
VOC Content	Negligible — low-volatility solid; not classified as VOC under standard definitions.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage and handling conditions.
Conditions to Avoid	Avoid heat above 60°C (to prevent caking/melting in storage), ignition sources, dust cloud formation, contamination, and contact with incompatible materials.
Incompatible Materials	Strong oxidising agents (nitric acid, chlorine, permanganates, peroxides). Avoid contact with concentrated acids and halogens.



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Reactive with aluminium chloride (AlCl_3) under elevated temperature – not a concern in ambient blending or storage.

Hazardous Decomposition	Carbon oxides (CO , CO_2) and irritating or toxic fumes may be formed in fire or on thermal decomposition above $\sim 200^\circ\text{C}$.
Hazardous Reactions	No hazardous polymerisation. Will not occur under normal conditions when stored and handled correctly.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	Not classified. GMS is widely used as a food emulsifier (GRAS / E471). Oral LD50 data not required for classification. Generally regarded as low acute oral toxicity.
Acute Dermal Toxicity	Not classified. No significant dermal toxicity expected at normal handling.
Acute Inhalation Toxicity	Not classified. Inhalation of dust or melt vapour may cause mechanical respiratory irritation. No specific LC50 data identified.
Skin Irritation	Not classified as a skin irritant. Prolonged or repeated contact may cause mild irritation; wash skin after contact.
Eye Irritation	Not classified as an eye irritant. Physical contact (dust/melt) may cause mild mechanical irritation; rinse with water.
Sensitisation	Not classified as a skin or respiratory sensitizer based on available data.
Carcinogenicity	Not listed as a carcinogen by IARC, NTP, ACGIH, OSHA, or EU Annex VI based on available data.
Mutagenicity	Not classified. No mutagenicity data identified in reviewed sources.

SECTION 12 ECOLOGICAL INFORMATION

Aquatic Toxicity	No acute or chronic aquatic toxicity classification identified. GMS is a natural fatty acid ester with low expected aquatic toxicity; avoid direct release to water bodies.
Persistence / Degradability	Expected to be readily biodegradable (natural ester of glycerol and stearic acid). Confirm with supplier or test data for regulatory purposes.
Bioaccumulation	Log Pow ~ 8 indicates potential for bioaccumulation; however, fatty acid esters are generally metabolised rapidly in organisms. BCF data not confirmed; obtain supplier data for registration purposes.



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Mobility in Soil	Low water solubility and high log Pow suggest low mobility in soil. May adsorb to soil particles. Prevent release to soil and groundwater.
Other Adverse Effects	Avoid uncontrolled release to the environment. Manage releases and waste under applicable local environmental regulations.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste from Product	Dispose of contents through an authorised waste contractor in accordance with local regulations. Do not discharge to drains, sewers, or the environment without appropriate treatment.
Contaminated Packaging	Empty containers may retain residues; handle as potentially hazardous until thoroughly cleaned or disposed of through an approved waste contractor.
Indian Regulations	Follow applicable Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, and State Pollution Control Board requirements. Assign waste code per actual process and local regulation.

SECTION 14 TRANSPORT INFORMATION

PARAMETER	UN / ADR (ROAD)	IMDG (SEA)	IATA (AIR)
UN Number	Not regulated	Not regulated	Not regulated
Proper Shipping Name	Not regulated	Not regulated	Not regulated
Class	Not regulated	Not regulated	Not regulated
Packing Group	Not regulated	Not regulated	Not regulated
Marine Pollutant	No	No	—

No UN transport hazard classification identified. Ship in approved, compatible containers. Verify current carrier rules and consult a qualified dangerous-goods specialist before international shipment. The Class 3 / PG II labelling reference in the source document was an error carried from a flammable-liquid template and has been removed — GMS is not a regulated dangerous good under current data.

SECTION 15 REGULATORY INFORMATION

EU / REACH / CLP	Observe REACH and CLP requirements where applicable. Classified and labelled according to the GHS classification in Section 2 (not classified). Observe applicable workplace chemical, VOC, and environmental requirements.
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OSHA (USA)	Prepared in OSHA HCS / HazCom-aligned 16-section SDS format. GMS is generally recognised as safe (GRAS) by US FDA for food use.
India	Observe applicable MSIHC Rules 1989, Factories Act 1948, Hazardous Waste Rules 2016, Water/Air (Prevention of Pollution) Acts, and State CPCB/SPCB requirements.
Other Jurisdictions	Canada WHMIS 2015/HPR: classify and label using Section 2 classification; Canadian sale may require bilingual SDS/label. China GB/T: apply applicable GB/T SDS and classification requirements. Australia AICS / Middle East GCC: check inventory status before export or import. TSCA (USA): verify inventory / SNUR status before US import or distribution.

SECTION 16 OTHER INFORMATION

Prepared By	Supreme Petro Chemicals — Technical Department
SDS Standard	UN GHS Rev.11 (2025); OSHA HCS/HazCom; EU CLP/REACH Annex II; Canada WHMIS/HPR — 16-section format
Revision Date	24 June 2026
Version	3.0 (supersedes prior issues)
Disclaimer	Information is given in good faith and believed accurate at issue. It does not constitute a specification or guarantee; the user is responsible for safe use, handling and compliance with all applicable local regulations.

FULL TEXT OF H-STATEMENTS

- None — Glycerol Mono Stearate (GMS) is not classified as hazardous under GHS. No H-statements apply.