

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product Name: Glyceryl Monostearate

Product Code(s): Glyceryl Monostearate

Synonym(s): Glycerin monostearate; Glycerol monostearate; Monostearin; Octadecanoate acid, monoester with 1,2,3-propanetriol

REACH Registration Number: No data available

1.2 Relevant identified uses of the substance or mixture and uses advised against

General use: For use in industrial and laboratory applications

Uses advised against: None known

1.3 Details of the supplier and of the safety data sheet

Distributor

Allan Chemical Corporation
235 Margaret King Avenue
Ringwood, NJ 07456 USA
+1-973-962-4014

1.4 Emergency telephone number

Chem Tel
+1-813-248-0585
+1-800-255-3924

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Substance

Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008

Not a dangerous substance according to OSHA or to European Union Legislation

2.2 Label Elements

Not classified as dangerous according to GHS

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None known

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
~97	Glyceryl Monostearate	31566-31-1	250-705-4	-----	-----
<3	Glycerides, C16 - 18 mono- and di-	85251-77-0	286-490-9	-----	-----
<3	Glycerides, C16-18 mono	91052-47-0	293-208-8	-----	-----

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence, require reporting in this section.

3.2 Mixtures

Not applicable

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If exposure to product mist causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Loosen tight fitting clothing such as a collar, tie, belt or waistband. If symptoms persist, seek medical attention.

Eyes: Immediately flush eyes with large amounts of water for 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after the first 2 minutes and continue rinsing. If irritation persists seek medical attention, preferably from an ophthalmologist.

Skin: Flush skin with water while removing contaminated clothing. Wash affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes thoroughly before reuse. If irritation persists, seek medical attention.

Ingestion: Rinse mouth thoroughly with water if the victim is conscious. Remove dentures, if present. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Obtain medical attention, especially if a large amount is swallowed.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: May cause eye irritation.

Skin: May cause mild, transient skin irritation. Considered a low hazard during normal industrial handling.

Inhalation: May cause irritation of the respiratory tract. Considered a low hazard during normal industrial handling.

Ingestion: May cause digestive upset with nausea, vomiting, abdominal pain and diarrhea.

Chronic: None known. The toxicological properties of this substance have not been fully investigated.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to Doctor and Hospital Personnel: Treat symptomatically and supportively.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishable media

Suitable methods of extinction: Use extinguishing media such as water fog, water spray, carbon dioxide, dry chemical and foam.

Unsuitable methods of extinction: None known

5.2 Special hazards arising from the substance or mixture

May be combustible at high temperatures. Closed containers may explode due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

Explosion hazards: Powdered form of this material may form combustible dust concentrations in air.

5.3 Advice for firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, water contaminated by this material should be contained from being discharged to any waterway, sewer or drain to prevent environmental contamination.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear all appropriate protective equipment designated in Section 8. Remove all sources of ignition. No smoking. Ventilate the area. Spills of micro-beads or pastilles may create a slip hazard.

6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways.

6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. Carefully collect product and place in an approved container for proper disposal. Minimize dust generation during cleanup. Wash affected area with soap and water. Observe possible material restrictions (Sections 7.2 and 10.5). Dispose of in accordance with federal, state and local regulations.

6.4 Reference to other sections

See Section 13 for additional waste treatment information.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8. Do not get in eyes or on skin or clothing. No smoking. If normal use of this material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing and shoes before reuse.

Advice on protection against fire and explosion

Powdered form of this material may form combustible dust concentrations in air.

7.2 Conditions for safe storage, including any incompatibilities

Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10.5), food and drink. Store away from direct sunlight or ultraviolet light. Transfer only to approved, light-resistant containers having correct labeling. Keep container tightly closed. Protect containers against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent spillage. Containers may be hazardous when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Do not take internally. Keep out of reach of children.

7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure values.

8.2 Exposure controls

Engineering Measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

Eye/face protection: Wear protective goggles or safety glasses with non-perforated side shields. Refer to 29 CFR 1910.133, ANSI Z87.4 or Standard EN 166.

Hand Protection: Wear gloves recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of gloves must be greater than the intended use period.

Other protective equipment: Wear protective clothing and protective boots if the situation requires.

Respiratory Protection: None required with normal use. Always use an approved respirator when vapor/aerosols are generated. Where risk assessment shows air-purifying respirators are appropriate use a full-faced respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls: Do not empty into drains.

PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.



SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	White to off-white powder, micro-beads, flakes or pastilles
Odor	Slight, fatty
Odor Threshold	No data available
Molecular Weight	358.56 g/mol
Chemical Formula	C ₂₁ H ₄₂ O ₄
pH	6.0 - 7.0
Freezing/Melting Point, Range	54 - 70 °C (129 - 158 °F)
Initial Boiling Point	238 - 239 °C (460 - 462 °F)
Evaporation Rate	No data available
Flammability (solid, gas)	Non-flammable; powder may form combustible dust in air
Flash Point	180 °C (356 °F) COC
Autoignition Temperature	>250 °C (482 °F)
Decomposition Temperature	>200 °C (>392 °F)
Lower Explosive Limit (LEL)	No data available
Upper Explosive Limit (UEL)	No data available
Vapor Pressure	0.0001 mbar @ 20 °C
Vapor Density	No data available
Specific Gravity	0.95 - 0.96 @ 21 °C
Viscosity	No data available
Solubility in Water	Insoluble
Partition Coefficient: n-octanol/water	log Pow = 6.62 @ 25 °C
Oxidizing Properties	Not applicable
Explosive Properties	Not applicable
Volatiles by Volume @ 21 °C	<1%

9.2 Other data

No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

No specific test data related to reactivity is available for this product.

10.2 Chemical stability

This product is stable under recommended storage conditions, handling and use.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

High temperatures; exposure to light; contact with incompatible materials.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Thermal decomposition products include oxides of carbon.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Oral Toxicity

LD₅₀, rat: 5,000 mg/kg

Acute inhalation toxicity

No data available

Acute dermal toxicity

No data available

Skin irritation/corrosion

May cause mild skin irritation

Eye irritation/corrosion

May cause eye irritation

Sensitization

No data available

Genotoxicity in vitro

No data available

Mutagenicity

No data available

Specific organ toxicity - single exposure

No data available

Specific organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further information

No component of this product present at levels greater than or equal to the 0.1% threshold (de minimis) is identified as a probable, possible, potential or confirmed carcinogen by ACGIH, IARC, NTP or OSHA. No data is available regarding the mutagenicity or teratogenicity of this product, nor is there any available data that indicates that it causes adverse developmental or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION**12.1 Toxicity**

Acute and prolonged toxicity to fish: LC₅₀ - *Leuciscus idus* (Golden orfe), 96 h: 10,000 mg/l

12.2 Persistence and degradability

This material is readily biodegradable.

12.3 Bioaccumulation potential

Bioaccumulation potential for this product is low.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects**Additional ecological information**

Do not allow material to run into surface waters, wastewater or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Methods of disposal: The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Disposal of surplus and non-recyclable product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements. Avoid dispersal of spilt material or runoff and contact with soil, waterways, drains and sewers.

RCRA P-Series: No listings

RCRA U-Series: No listings

SECTION 14 - TRANSPORT INFORMATION

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

NOT REGULATED FOR TRANSPORT

SECTION 15 - REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for substance or mixture****U. S. Federal Regulations**

OSHA Hazard Communication Standard: This material is not classified as highly hazardous in accordance with OSHA 29 CFR 1910.1200.

OSHA Process Safety Management Standard: Chemicals in this product are not regulated under OSHA PSM Standard 29 CFR 1910.119.

EPA Risk Management Planning Standard: Chemicals in this product are not regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

EPA Federal Insecticide, Fungicide and Rodenticide Act: Glyceryl Monostearate is a registered Pesticide under the FIFRA, 40 CFR Part 150.

Toxic Substance Control Act (TSCA) Inventory: All components of this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.4(f)(2) and Chemical Code Number

No listings

Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number

No listings

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals

No listings

Superfund Amendments and Reauthorization Act (SARA)**SARA 313 Information:** None of the chemicals in this product are subject to reporting requirements of Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.**SARA Section 311/312 Hazard Categories:** None known**SARA 302/304 Extremely Hazardous Substance:** None of the chemicals in this product are subject to reporting requirements of these sections of Title III of SARA.**SARA 302/304 Emergency Planning & Notification:** None of the chemicals in this product are subject to reporting requirements of these sections of Title III of SARA.**Comprehensive Compensation and Liability Act (CERCLA):** This product contains no CERCLA reportable substances.**Clean Air Act (CAA)**

This product does not contain any substances that listed as Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain any Class 1 Ozone depleters.

This product does not contain any Class 2 Ozone depleters.

Clean Water Act (CWA)

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.

U.S. State Regulations**California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

This product contains no chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm.

Other U.S. State Inventories

Substances in this product are not listed on any State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists.

Canada**WHMIS Hazard Symbol and Classification:** None allocated**Canadian National Pollutant Release Inventory (NPRI):** None of the substances in this product are listed on the NPRI.**European Economic Community****WGK, Germany (Water danger/protection):** 1 (low hazard to waters)**Global Chemical Inventory Lists**

Country	Inventory Name	Inventory Listing*
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*Yes - All components of this product are in compliance with the inventory requirements administered by the governing country.

No - One or more components of this product are not on the inventory or are exempt from listing.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16 - OTHER INFORMATION**Hazardous Material Information System (HMIS)**

Health	1
Flammability	1
Physical Hazard	0
Personal Protection	C

C = safety glasses, gloves and an apron

HMIS Hazard Rating Legend0 = Minimal 1 = Slight 2 = Moderate 3 = Serious
4 = Severe * = Chronic Health Hazard**NFPA Hazard Rating Legend**0 = Insignificant 1 = Slight 2 = Moderate
3 = High 4 = Extreme**National Fire Protection Association (NFPA)****Flammability****Abbreviation Key**

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)
CAS	Chemical Abstract Services
CFR	Code of Federal Regulations
DOT	Department of Transportation
EC₅₀	Half maximal effective concentration

EMS Guide	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency
ErC₅₀	Reduction of Growth Rate
ERG	Emergency Response Guide Book
FDA	Food and Drug Administration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
HCS	Hazard Communication Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IC₅₀	Half Maximal Inhibitory Concentration
ICAO	International Civil Aviation Organization
IDLH	Immediately Dangerous to Life and Health
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
LC₅₀	50% Lethal Concentration
LD₅₀	50% Lethal Dose
LD_{L0}	Lowest Lethal Dose
mppcf	Millions of Particles Per Cubic Foot
NA	North America
NAERG	North American Emergency Response Guide Book
NIOSH	National Institute for Occupational Safety
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bioaccumulating and Toxic
PEL	Permissible exposure limit
PMCC	Pensky-Martens Closed Cup
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
RID	Dangerous Goods by Rail
RQ	Reportable Quantity
TCC/Tag	Tagliabue Closed Cup
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time-weighted Average
UN	United Nations
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulating
WHMIS	Workplace Hazardous Materials Information System

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