

1. Identification

Product identifier	Behenoyl Polyoxylglycerides		
Other means of identification			
Catalog number	1048550		
Synonyms	Glyceryl and polyethylene glycol behenate		
Recommended use	Specified quality tests and assay use only.		
Recommended restrictions	Not for use as a drug. Not for administration to humans or animals.		
Manufacturer/Importer/Supplier/Distributor information			
Manufacturer			
Company name	U. S. Pharmacopeia		
Address	12601 Twinbrook Parkway Rockville MD 20852-1790 United States		
Telephone	RS Technical Services	301-816-8129	
Website	www.usp.org		
E-mail	RSTECH@usp.org		
Emergency phone number	CHEMTREC within US & Canada	1-800-424-9300	
	CHEMTREC outside US & Canada	+1 703-527-3887	

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.

Label elements

Hazard symbol	None.
Signal word	None.
Hazard statement	Not available.
Precautionary statement	
Prevention	Not available.
Response	Not available.
Storage	Not available.
Disposal	Not available.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Methyl Behenate		929-77-1	88.09
Methyl Arachidate		1120-28-1	7.71
Methyl Stearate	Methyl octadecanoate	112-61-8	1.82
Methyl Lignocerate		2442-49-1	1.39
Methyl Palmitate	Methyl hexadecanoate	112-39-0	0.56
Methyl Erucate		1120-34-9	0.35
Methyl Laurate	Dodecanoic acid, methyl ester	111-82-0	0.04

Chemical name	Common name and synonyms	CAS number	%
Methyl Myristate	Myristic acid, methyl ester	124-10-7	0.04

4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	None known.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Remove from exposure. Remove contaminated clothing. For treatment advice, seek guidance from an occupational health physician or other licensed health-care provider familiar with workplace chemical exposures. In the United States, the national poison control center phone number is 1-800-222-1222. If person is not breathing, give artificial respiration. If breathing is difficult, give oxygen if available. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention.

5. Fire-fighting measures

Suitable extinguishing media	Water. Foam. Dry chemical or CO2. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	No unusual fire or explosion hazards noted.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Use water spray to cool unopened containers. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Wear appropriate personal protective equipment. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	For waste disposal, see section 13 of the SDS. Avoid the generation of dusts during clean-up. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly.
Conditions for safe storage, including any incompatibilities	Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

8. Exposure controls/personal protection

Occupational exposure limits

Exposure limit values

Industrial Use Components

	Type	Value
Methyl Stearate (CAS 112-61-8)	TWA	10 mg/m3

Biological limit values	No biological exposure limits noted for the ingredient(s).
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Appropriate engineering controls	Airborne exposure should be controlled primarily by engineering controls such as general dilution ventilation, local exhaust ventilation, or process enclosure. Local exhaust ventilation is generally preferred to general exhaust because it can control the contaminant at its source, preventing dispersion into the work area. An industrial hygiene survey involving air monitoring may be used to determine the effectiveness of engineering controls. Effectiveness of engineering controls intended for use with highly potent materials should be assessed by use of nontoxic surrogate materials.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Safety glasses with sideshields are recommended. Face shields or goggles may be required if splash potential exists or if corrosive materials are present. Approved eye protection (e.g., bearing the ANSI Z87 or CSA stamp) is preferred. Maintain eyewash facilities in the work area.
Skin protection	
Hand protection	Chemically compatible gloves. For handling solutions, ensure that the glove material is protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic nonlatex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy.
Other	For handling of laboratory scale quantities, a cloth lab coat is recommended. Where significant quantities are handled, work clothing may be necessary to prevent take-home contamination.
Respiratory protection	Where respirators are deemed necessary to reduce or control occupational exposures, use NIOSH-approved respiratory protection and have an effective respirator program in place (applicable U.S. regulation OSHA 29 CFR 1910.134).
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Powder.
Color	White.
Odor	Very faint.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	140 - 152.6 °F (60 - 67 °C)
Initial boiling point and boiling range	> 302 °F (> 150 °C)
Flash point	> 302.0 °F (> 150.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Dispersible.
Solubility (other)	Chloroform: Soluble. Ethanol: Insoluble. Methylene chloride: Soluble. Mineral oils: Soluble. Vegetable oils: Soluble.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidizing agents.
Hazardous decomposition products	Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Knowledge about health hazard is incomplete.
Skin contact	Knowledge about health hazard is incomplete.
Eye contact	Knowledge about health hazard is incomplete.
Ingestion	Knowledge about health hazard is incomplete.
Symptoms related to the physical, chemical, and toxicological characteristics	Not available.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Methyl Laurate (CAS 111-82-0)		
<u>Acute</u>		
Oral		
LD50	Rat	> 20000 mg/kg > 2000 mg/kg
Methyl Myristate (CAS 124-10-7)		
<u>Acute</u>		
Oral		
LD50	Rat	> 2000 mg/kg
Methyl Palmitate (CAS 112-39-0)		
<u>Acute</u>		
Oral		
LD50	Rat	> 2000 mg/kg
Methyl Stearate (CAS 112-61-8)		
Inhalation		
LC50	Rat	> 5 mg/l
Oral		
LD50	Rat	> 2000 mg/kg
Skin corrosion/irritation	Knowledge about health hazard is incomplete.	
Irritation Corrosion - Skin: P.I.I. value		
Methyl Laurate	Result: Non-irritant.	
Serious eye damage/eye irritation	Knowledge about health hazard is incomplete.	
Local effects		
Methyl Laurate	Draize test Result: Non-irritant. Species: Rabbit Organ: Eye	
Methyl Palmitate	Eye irritation Result: Not irritating. Species: Rabbit	
Methyl Stearate	Eye irritation test Result: Non-irritant. Species: Rabbit	

Local effects

Methyl Laurate

Eye irritation test, OECD 405

Result: Slight irritation.

Species: Rabbit

Methyl Palmitate

Eye irritation, 70 microliters of a 50% dilution administered for 24 hours; occlusive patch.

Result: Not irritating.

Species: Human

Severity: Slight.

Skin irritation

Result: Irritating.

Species: Rabbit

Severity: PDII = 4

Methyl Stearate

Skin irritation test

Result: Non-irritant.

Species: Rabbit

Methyl Laurate

Skin irritation test

Result: Slight irritation.

Species: Human

Skin irritation test, Open Epicutan test

Result: Non-irritant.

Species: Human

Methyl Myristate

Skin irritation test, Semi-occlusive patch test

Result: Distinct erythema and oedema at 4 hrs. Slight erythema and oedema and slight to distinct cracking and scaling at 72hrs.

Species: Rabbit

Methyl Palmitate

Skin irritation, administered neat; semioclusive.

Result: Irritating.

Species: Rabbit

Respiratory or skin sensitization**Respiratory sensitization**

Knowledge about health hazard is incomplete.

Skin sensitization

Knowledge about health hazard is incomplete.

Methyl Laurate

Guinea pig maximization test

Result: Negative.

Germ cell mutagenicity

Knowledge about mutagenicity is incomplete.

Mutagenicity

Methyl Palmitate

Ames test (Salmonella typhimurium)

Result: Negative.

Methyl Myristate

Ames test (Salmonella typhimurium; E. coli)

Result: Negative.

Methyl Laurate

Ames test (Salmonella typhimurium; E. coli), with and without activation.

Result: Negative.

Methyl Palmitate

Mutagenicity, Bacillus subtilis assay

Result: Negative.

Methyl Laurate

Mutagenicity, Chinese hamster lung (CHL/IU) cells

Result: Negative.

Carcinogenicity

Knowledge about carcinogenicity is incomplete.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity

Knowledge about health hazard is incomplete.

Reproductivity

Methyl Laurate

0 - 1000 mg/kg/day Reproductivity / Developmental, administered orally.

Result: No maternal toxicity and no embryo/fetotoxicity.

Species: Rat

Specific target organ toxicity - single exposure

Knowledge about health hazard is incomplete.

Specific target organ toxicity - repeated exposure

Knowledge about health hazard is incomplete.

Aspiration hazard

Knowledge about health hazard is incomplete.

12. Ecological information

Ecotoxicity

Components		Species	Test Results
Methyl Laurate (CAS 111-82-0)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Algae	1.5 mg/l, 96 hours
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	> 1000 mg/l, 96 hours (static)
Methyl Palmitate (CAS 112-39-0)			
Aquatic			
<i>Acute</i>			
Fish	LC50	Danio rerio	550 mg/l, 96 Hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Octanol/water partition coefficient log Kow

Methyl Laurate	6.02
Methyl Palmitate	7.38, = log Pow
Methyl Stearate	8.35

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

General information It is the shipper's responsibility to determine the correct transport classification at the time of shipment.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 11-03-2008

Revision date 06-16-2017

Version # 02

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