OTTO CHEMIE PVT LTD

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----------ISO 9001: 2015----------

MATERIAL SAFETY DATA SHEET

1 Product identifiers
Product name : Castor oil, equivalent to USP
Product Code : C 1708
CAS-No. : 8001-79-4

SECTION 2 Hazard identification
2.1Classification of the substance or mixture
Not classified.
2.2GHS label elements, including precautionary statements
Pictogram(s) No symbol.
Signal word No signal word.
Hazard statement(s) none
Precautionary statement(s)
Prevention none
Response none
Storage none
Disposal none
2.3Other hazards which do not result in classification
none

3.Composition/information on ingredients
3.1Substances

Chemical name	Common names and synonyms	CAS number	EC numbe	Concentration
2,3-bis[[(Z)-12-hydroxyoctadec9-enoyl]oxy]propyl (Z)-12-hydroxyoctadec-9-enoate	2,3-bis[[(Z)-12-hydroxyoctadec9-enoyl]oxy]propyl (Z)-12-hydroxyoctadec-9-enoate	8001-79-4	none	**100%**

4.First-aid measures
4.1Description of necessary first-aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2Most important symptoms/effects, acute and delayed
If ingested causes severe diarrhea. (USCG, 1999)
4.3Indication of immediate medical attention and special treatment needed, if necessary
/SRP:/ Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. /Hydrocarbon Blends, Mixtures, and Related Compounds/

5.Fire-fighting measures
5.1Extinguishing media
Suitable extinguishing media
To fight fire, use /carbon dioxide/, dry chemical, fog, mist.
5.2Specific hazards arising from the chemical
This chemical is combustible.
5.3Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.

6.Accidental release measures
6.1Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
6.2Environmental precautions
Collect leaking liquid in covered containers.
6.3Methods and materials for containment and cleaning up
SRP: Wastewater from contaminant suppression, cleaning of protective clothing/equipment, or contaminated sites should be contained and evaluated for subject chemical or decomposition product concentrations. Concentrations shall be lower than applicable environmental discharge or disposal criteria. Alternatively, pretreatment and/or discharge to a permitted wastewater treatment facility is acceptable only after review by the governing authority and assurance that "pass through" violations will not occur. Due consideration shall be given to remediation worker exposure (inhalation, dermal and ingestion) as well as fate during treatment, transfer and disposal. If it is not practicable to manage the chemical in this fashion, it must be evaluated in accordance with EPA 40 CFR Part 261, specifically Subpart B, in order to determine the appropriate local, state and federal requirements for disposal.

7.Handling and storage
7.1Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.
7.2Conditions for safe storage, including any incompatibilities
Castor oil should be stored at a temperature not exceeding 25\u00b0C in well-filled airtight containers, protected from light.
8.Exposure controls/personal protection
8.1Control parameters
Occupational Exposure limit values
no data available
Biological limit values
no data available

8.2Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
8.3Individual protection measures, such as personal protective equipment (PPE)
Eye/face protection
Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection
Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique(without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
Respiratory protection
Wear dust mask when handling large quantities.
Thermal hazards
no data available

9.Physical and chemical properties
Physical state Light yellow viscous liquid.
Colour Pale-yellowish or almost colorless, transparent, viscous liquid
Odour Faint, mild odor
Melting point/ freezing point -12\u00baC
Boiling point or initial boiling
point and boiling range
313\u00b0C(lit.)
Flammability Combustible.
Lower and upper explosion
limit / flammability limit
no data available
Flash point >113\u00b0C
Auto-ignition temperature 448.89\u00b0C
Decomposition temperature no data available
pH no data available
Kinematic viscosity At 25\u00b0C: 6-8 poises, also expressed as U +/- 1/2 (GardnerHoldt scale)
Solubility less than 1 mg/mL at 20\u00b0C
Partition coefficient noctanol/water (log value)
no data available
Vapour pressure no data available
Density and/or relative

density
0.961g/mLat 25\u00b0C
Relative vapour density no data available
Particle characteristics no data available

10.Stability and reactivity
10.1Reactivity
no data available
10.2Chemical stability
Has excellent keeping qualities, does not turn rancid unless subjected to excessive heat[The Merck Index, Fourteenth Edition (2006)
10.3Possibility of hazardous reactions
Combustible when exposed to heat. Spontaneous heating may occur.CASTOR OIL can develop heat spontaneously in the air. [Hawley]. Reacts with acids to liberate heat along with alcohols and acids. Heat is also generated by interaction with caustic solutions. Strong oxidizing acids may cause a vigorous reaction that is sufficiently exothermic to ignite the reaction products. Flammable hydrogen is generated by mixing with alkali metals and hydrides.
10.4Conditions to avoid
no data available
10.5Incompatible materials
Incompatible with strong oxidizing agents.
10.6Hazardous decomposition products
Hazardous decomposition products formed under fire conditions: Carbon oxides.

11.Toxicological information
Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:
Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg
Inhalation LC50 Rat: > 50mg/L.
Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.
Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).
Special Remarks on Toxicity
to Animals: Not available.
Special Remarks on Chronic Effects on Humans: Not available.
Special Remarks on other Toxic Effects on Humans: Not available.

12.Ecological information
12.1Toxicity
Toxicity to fish: no data available
Toxicity to daphnia and other aquatic invertebrates: no data available
Toxicity to algae: no data available
Toxicity to microorganisms: no data available
12.2Persistence and degradability
no data available
12.3Bioaccumulative potential
no data available
12.4Mobility in soil
no data available
12.5Other adverse effects
no data available

13.Disposal considerations
13.1Disposal methods
Product
The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging
Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14.Transport information
14.1UN Number
ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods.
14.2UN Proper Shipping Name
ADR/RID: unknown
IMDG: unknown
IATA: unknown
14.3Transport hazard class(es)
ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods.
14.4Packing group, if applicable
ADR/RID: Not dangerous goods. IMDG: Not dangerous goods. IATA: Not dangerous goods.
14.5Environmental hazards

ADR/RID: no IMDG: no IATA: no
14.6Special precautions for user
no data available
14.7Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
no data available
15.Regulatory information

15.Regulatory information

15.1Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC numbe
2,3-bis[[(Z)-12-hydroxyoctadec-9-enoyl]oxy]propyl (Z)-12-hydroxyoctadec-9-enoate	2,3-bis[[(Z)-12-hydroxyoctadec-9-enoyl]oxy]propyl (Z)-12-hydroxyoctadec-9-enoate	8001-79-4	none
European Inventory of Existing Commercial Chemical Substances (EINECS)		Listed.	
EC Inventory		Listed.	
United States Toxic Substances Control Act (TSCA) Inventory		Listed.	
China Catalog of Hazardous chemicals 2015		Listed.	
New Zealand Inventory of Chemicals (NZIoC)		Not Listed.	
Philippines Inventory of Chemicals and Chemical Substances (PICCS)		Listed.	
Vietnam National Chemical Inventory		Listed	
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)		Listed	

Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.