OTTO CHEMIE PVT LTD

201, 51-53 Maroo Bhavan, Kalbadevi, Mumbai - 400002, India. Tel : + 91 22 2207 0099 / 6638 2599 Email : info@ottokemi.com, Web : www.ottokemi.com -----ISO 9001: 2015------

MATERIAL SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers Product name : Polycaprolactone, average Mn 45,000 Product Code : P 1967 CAS-No.: 24980-41-4

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008. 2.2 Label elements Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008. 2.3 Other hazards This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances Synonyms : 6-Caprolactone polymer Formula : (C6H10O2)n CAS-No. : 24980-41-4 No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first-aid measures If inhaled After inhalation: fresh air In case of skin contact In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. In case of eye contact After eye contact: rinse out with plenty of water. Remove contact lenses. If swallowed After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell. 4.2 Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11 4.3 Indication of any immediate medical attention and special treatment needed No data a vailab le **SECTION 5: Firefighting measures**

svstem.

5.1 Extinguishing media Suitable extinguishing media Water Foam Carbon dioxide (CO2) Dry powder Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given. 5.2 Special hazards arising from the substance or mixture Carbon oxides Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire. 5.3 Advice for firefighters In the event of fire, wear self-contained breathing apparatus. 5.4 Further information Prevent fire extinguishing water from contaminating surface water or the ground water

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.
6.2 Environmental precautions
Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions
(see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.
6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Tightly closed. Dry. 7.3 Specific end use(s) 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 Ingredients with workplace control parameters 8.2 Exposure controls Personal protective equipment Eve/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses Skin protection This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L Splash contact

Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L Respiratory protection required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P1 The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
a) Appearance Form: Chunks Color: dark violet
b) Odor No data available
c) Odor Threshold No data available
d) pH No data availablee) Melting point/freezing point
Melting point/range: 60 °C f) Initial boiling point
and boiling range
No data available
g) Flash point > 110 °C
h) Evaporation rate No data available

i) Flammability (solid, gas) No data a vailable j) Upper/lower flammability or explosive limits No data a vailab le k) Vapor pressure No data available I) Vapor density No data available m) Density 1,145 g/mL at 25 °C Relative density No data available n) Water solubility No data available o) Partition coefficient: n-octanol/water No data a vailab le p) Autoignition temperature No data a vailab le q) Decomposition temperature No data a vailab le r) Viscosity Viscosity, kinematic: No data available Viscosity, dynamic: No data available s) Explosive properties No data available t) Oxidizing properties No data available 9.2 Other safety information No data a vailable

SECTION 10: Stability and reactivity 10.1 Reactivity

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. 10.2 Chemical stability The product is chemically stable under standard ambient conditions (room temperature) . 10.3 Possibility of hazardous reactions No data available 10.4 Conditions to avoid Strong heating. 10.5 Incompatible materials

Strong oxidizing agents 10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects 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 other Toxic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

12.1 Toxicity No data a vailable 12.2 Persistence and degradability No data a vailable 12.3 Bioaccumulative potential No data a vailable 12.4 Mobility in soil No data a vailable 12.5 Results of PBT and vP vB assessment This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. 12.6 Other adverse effects No data a vailable

SECTION 13: Disposal considerations

13.1 Waste treatment methods Product for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number ADR/RID: - IMDG:- IATA: -14.2 UN proper shipping name ADR/RID: Not dangerous goods IMDG: Not dangerous goodsIATA: Not dangerous goods 14.3 Transport hazard dass(es) ADR/RID: - IMDG:- IATA: -14.4 Packaging group ADR/RID: - IMDG:- IATA: -14.5 Environmental hazards ADR/RID: no IMDG Marine pollutant: no IATA: no 14.6 Special precautions for user Further information Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

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.