An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : <u>info@ottokemi.com</u> Web : <u>www.ottokemi.com</u>

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Diphenyl ether, 98% Product Code: D 2325 CAS No : 101-84-8

1.2. Relevant identified uses of the substance or mixture and uses advised against Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet Company identification OTTO CHEMIE PVT LTD 101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Email info@ottokemi.com 1.4. Emergency telephone number Phone no.: + 91 22 2207 0099 (9:00am - 6:00 pm) **SECTION 2: Hazards identification** 2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Eye irritation (Category 2), H319 Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 2), H411 For the full text of the H-Statements mentioned in this Section, see Section 16 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Warning Hazard statement(s) H319 Causes serious eye irritation. H410 Very toxic to aquatic life with long lasting effects. Precautionary statement(s) Wash skin thoroughly after handling. P264 Avoid release to the environment. P273 Wear eye protection/ face protection. P280 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/ attention. Collect spillage. P391 Supplemental Hazard none Statements Reduced Labeling (<= 125 ml) Pictogram Signal Word Warning Hazard statement(s) none Precautionary none statement(s) Supplemental Hazard none Statements

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.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: Phenyl ether	
	Diphenyl oxide	
Formula	: C12H10O	
Molecular weight	: 170,21 g/mol	
CAS-No.	: 101-84-8	
EC-No.	: 202-981-2	

Component	Classification	Concentration
Diphenyl ether		
CAS-No. 202-981-2	Eye Irrit. 2; Aquatic Acute 1; Aquatic	<= 100 %
EC-No. 101-84-8	Chronic 2; H319, H400, H411 M-Factor -	
	Aquatic Acute: 1	

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures General advice Show this material safety data sheet to the doctor in attendance. 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. Call in ophthalmologist. Remove contact lenses. If swallowed After swallowing: immediately make victim drink water (two glasses at most). Consult a physician. 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 available **SECTION 5: Firefighting measures** 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 system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

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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. Storage class Storage class (TRGS 510): 11: Combustible Solids 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 Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety classes 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: butvl-rubber Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested:Butoject® (KCL 898) 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). Splash contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested:Butoject® (KCL 898) Body Protection protective clothing Respiratory protection Recommended Filter type: Filter A-(P2) 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.

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For personal protection see section 8. 6.2 Environmental precautions

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state b) Color c) Odor d) Melting point/freezing point e) Initial boiling point and boiling range f) Flammability (solid. gas) g) Upper/lower flammability or explosive limits h) Flash point i) Autoignition temperature j) Decomposition temperature k) pH I) Viscosity

m) Water solubility n) Partition coefficient: n-octanol/water o) Vapor pressure p) Densitv Relative density q) Relative vapor density r) Particle characteristics s) Explosive properties t) Oxidizing properties 9.2 Other safety information Surface tension

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 Violent reactions possible with: Oxidizing agents chlorosulfonic acid 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

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crystalline white unpleasant Melting point/range: 25 - 27 °C - lit.

259 °C - lit.

No data available

Upper explosion limit: 1,5 %(V) Lower explosion limit: 0,8 %(V)

115 °C - closed cup 618 °C at 1.013 hPa No data available

No data available Viscosity, kinematic: No data available Viscosity, dynamic: 2,6 mPa.s at 40 °C 0,018 g/l at 25 °C - OECD Test Guideline 105- slightly soluble log Pow: 4,21 at 25 °C - A remarkable bioaccumulation potential is expected (log Po/w >3). < 1,33 hPa at 20 °C 1,073 g/mL at 25 °C - lit. No data available No data available

No data available

No data available none 0,04 N/m at 25 °C

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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. **SECTION 12: Ecological information** 12.1 Toxicity Toxicity to fish static test LC50 - Oncorhynchus mykiss (rainbow trout) - 4,2 mg/l -96 h (US-EPA) Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 1,96 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 0,58 mg/l - 72 h Remarks: (ECHA) Toxicity to bacteria static test EC50 - activated sludge - > 100 mg/l - 3 h (OECD Test Guideline 209) 12.2 Persistence and degradability Biodegradability aerobic - Exposure time 20 d Result: 76 % - Readily biodegradable. Remarks: (ECHA) 12.3 Bioaccumulative potential Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 7 d - 16 µg/I(Diphenyl ether) Bioconcentration factor (BCF): 470 12.4 Mobility in soil No data available 12.5 Results of PBT and vPvB 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 Endocrine disrupting properties Product. : The substance/mixture does not contain components Assessment considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. 12.7 Other adverse effects Discharge into the environment must be avoided. **SECTION 13: Disposal considerations** 13.1 Waste treatment methods No data available **SECTION 14: Transport information** 14.1 UN number ADR/RID: 3077 IMDG: 3077 IATA: 3077 14.2 UN proper shipping name ADR/RID ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diphenyl ether) IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diphenyl ether) ΙΑΤΑ : Environmentally hazardous substance, solid, n.o.s. (Diphenyl ether) 14.3 Transport hazard class(es) ADR/RID: 9 IMDG: 9 IATA: 9 14.4 Packaging group ADR/RID: III IMDG: III IATA: III

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14.5 Environmental hazards IATA: yes ADR/RID: yes IMDG Marine pollutant: yes 14.6 Special precautions for user Further information EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.Packages smaller than or equal to 5 kg / L, not dangerous goods of Class 9 **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. National legislation Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous : ENVIRONMENTAL HAZARDS substances. Other regulations Take note of Dir 94/33/EC on the protection of young people at work. 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.

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