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 : <u>www.ottokemi.com</u> -------ISO 9001: 2015------

MATERIAL SAFETY DATA SHEET

1.Identification 1.1GHS Product identifier Tetrahydrofuran, for UV spe Code T 1420	ectroscopy, 99.8%
2.Hazard identification 2.1Classification of the sub Flammable liquids, Categor Eye irritation, Category 2 Specific target organ toxicit Carcinogenicity, Category 2	y 2 y \u2013 single exposure, Category 3
2.2GHS label elements, inc Pictogram(s)	Auding precautionary statements
Signal word Hazard statement(s)	Danger H225 Highly flammable liquid and vapour H319 Causes serious eye irritation H335 May cause respiratory irritation H351 Suspected of causing cancer
Precautionary statement(s) Prevention	 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof [electrical/ventilating/lighting/] equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. P280 Wear protective gloves/protective clothing/eye protection/face protection. P264 Wash thoroughly after handling. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P271 Use only outdoors or in a well-ventilated area. P201 Obtain special instructions before use.
Response	 P202 Do not handle until all safety precautions have been read and understood. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P370+P378 In case of fire: Use to extinguish. 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. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/doctor/u2026if you feel unwell. P308+P313 IF exposed or concerned: Get medical advice/ attention
Storage	attention. P403+P235 Store in a well-ventilated place. Keep cool. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
Disposal 2.30ther hazards which do none	P501 Dispose of contents/container to

3. Composition/information on ingredients

3.1Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Tetrahydrofuran	Tetrahydrofuran	109-99-9	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 eve 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

no data available

4.3Indication of immediate medical attention and special treatment needed, if necessary no data available

5.Fire-fighting measures

5.1Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2Specific hazards arising from the chemical

no data available

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

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. 6.3Methods and materials for containment and cleaning up

Pick up and arrange disposal. Sweep up and shovel. Keep in suitable, closed containers 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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

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).

Škin 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 Colorless ether-like clear liquid Colour no data available Odour no data available Melting point/ freezing point -108\u00b0C(lit.) Boiling point or initial boiling 65-67\u00b0C(lit.) point and boiling range Flammability no data available Lower and upper explosion no data available limit / flammability limit Flash point -17\u00b0C 321.11\u00b0C Auto-ignition temperature Decomposition temperature no data available pН no data available . Kine matic viscosity no data available In water: miscible Solubility Partition coefficient nno data available octanol/water (log value) Vapour pressure <0.01 mm Hg (25 \u00b0C) Density and/or relative 0.889g/mLat 25\u00b0C(lit.) density Relative vapour density 2.5 (vs air) no data available Particle characteristics

10. Stability and reactivity 10.1 Reactivity 10.1 Reactivity no data available 10.2 Chemical stability Stable under recommended storage conditions. 10.3 Possibility of hazardous reactions no data available 10.4 Conditions to avoid no data available 10.5 Incompatible materials no data available 10.6 Hazardous decomposition products no data available

11. Toxicological information Acute toxicity Oral: no data available Inhalation: no data available Dermal: no data available Skin corrosion/irritation no data available Serious eye damage/irritation no data available Respiratory or skin sensitization no data available Germ cell mutagenicity no data available Carcinogenicity no data available Reproductive toxicity no data available STOT-single exposure no data available STOT-repeated exposure no data available Aspiration hazard no data 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 inform	ation				
14.1UN Number					
ADR/RID: UN2056		IMDG: UN2056	IATA: UN2056	5	and the second second
14.2UN Proper Ship	oping Name				
ADR/RID: TETRAH	YDROFURAN				
IMDG: TETRAHYD				a u	
IATA: TETRAHYDF	ROFURAN			11 11	
14.3Transport haza	rd class(es)				
ADR/RID: 3		IMDG: 3	IATA: 3		
14.4Packing group,	if applicable				
ADR/RID: II		IMDG: II	IATA: II		
14.5Environmental	hazards				
ADR/RID: no		IMDG: no	IATA: no	1 1	
14.6Special precau	tions for user		16	1 1	
no data available					
	Ik according to A	Annex II of MARPOL 73	//8 and the IBC Code		
no data available	Sec.		W. Market		
15.Regulatory inform		-1			
Chemical name		al regulations specific f	CAS number	EC number	1
-		nes and synonyms	- 10 · 100	-	1
Tetrahydrofuran	Tetrahydrofur		109-99-9	none	1
European Inventory	of Existing Con	Listed.	1		
EC Inventory	-	Listed.			
United States Toxic		Listed.			
China Catalog of Ha		Listed.			
New Zealand Inven		Listed.			
Philippines Inventory of Chemicals and Chemical Substances (PICCS)				Listed.	
Vietnam National Chemical Inventory				Listed.	1
Chinese Chemical I	nventory of Exis	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.