## **OTTO CHEMIE PVT LTD**

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## MATERIAL SAFETY DATA SHEET

1.Identification				
1.1GHS Product identifier				
1,3-Dibromopropane, 99%				
Code D 1456				
2.Hazard identification				
2.1Classification of the sub	stance or mixture			
Not classified.				
	luding precautionary statements			
Pictogram(s)	No symbol.			
Signal word	No signal word.			
Hazard statement(s)	none			
Precautionary statement(s)				
Prevention	none			
Response	none		22	
Storage	none			
Disposal	none			
2.30ther hazards which do	not result in classification			
none				
3.Composition/information 3.1Substances	on ingredients			
Chemical name	Common names and synonyms	CAS number	EC number	Concentration
1,3-Dibromopropane	1,3-Dibromopropane	109-64-8	none	100%
		100 04 0	none	10070
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 persor	into fresh air. If not breathing, give artificial respirati	on. Consult a physician.		
In case of skin contact				
	nty of water. Consult a physician.			
In case of eye contact				
	y of water for at least 15 minutes and consult a phys	ician.		
If swallowed				
	uth to an unconscious person. Rinse mouth with wate	er. Consult a physician.		
4.2Most important sympton	ns/effects, acute and delayed			
	medical attention and special treatment needed, if ne	20055 any		
no data available	neulcal attention and special treatment needed, if he	ecessary		
5.Fire-fighting measures				
5.1Extinguishing media				
Suitable extinguishing med				
If material on fire or involve	d in fire: Do not extinguish fire unless flow can be sto	opped. Use water in flooding q	uantities as fog. So	olid
	effective. Cool all affected containers with flooding q		foam, dry chemica	al or
	ff water out of sewers and water sources. /Bromopro	panes/		
5.2Specific hazards arising	from the chemical			
no data available				
5.3Special protective action				
vvear self-contained breath	ing apparatus for firefighting if necessary.			
6.Accidental release measu				
	res otective equipment and emergency procedures			
	upment. Avoid dust formation. Avoid breathing vapo	urs mistor das Ensure adequ	uate ventilation	
	areas. Avoid breathing dust. For personal protection			
6.2Environmental precautic				

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).

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 clear liquid Colour Colorless liquid Sweet odor Odour 195\u00b0C(lit.) Melting point/ freezing point Boiling point or initial boiling point and boiling 167\u00b0C range Flammability no data available Lower and upper explosion limit / flammability no data available limit Flash point 51\u00b0C(lit.) Auto-ignition temperature no data available Decomposition temperature no data available no data available pН . Kinematic viscosity no data available Solubility In water:1.7 g/L (30 \u00baC) Partition coefficient n-octanol/water (log value) log Kow = 2.37 0mmHg at 25\u00b0C Vapour pressure Density and/or relative density 1.989 Relative vapour density 7 (vs air) Particle characteristics no data available 10.Stability and reactivity 10.1Reactivity

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

When heated to decomposition it emits toxic fumes of /hydrogen bromide/.

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: LC50 Pimephales promelas (Fathead minnow) 5.3 mg/L/24 hr /Conditions of bioassay not specified in source examined 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 An estimated BCF of 13 was calculated for 1,3-dibromopropane (SRC), using a measured log Kow of 2.37(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC). 12.4Mobility in soil The Koc of 1,3-dibromopropane is estimated as 460(SRC), using a measured log Kow of 2.37(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that 1,3-dibromopropane is expected to have moderate mobility in soil(SRC). Adsorption isotherms for 1,3-dibromopropane were calculated using a highly organic Florida Pahokee soil(4). The adsorption isotherms were non linear with an average soil adsorption coefficient (Kd) of 22.5 L/kg(4). The Freundlich adsorption coefficient (Kf) was 54 L/kg with fitting parameter N equal to 0.874(4). 12.50ther 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: UN3082 IMDG: UN3082 IATA: UN3082 14.2UN Proper Shipping Name ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. 14.3Transport hazard class(es) ADR/RID: 9 IMDG: 9 IATA: 9 14.4Packing group, if applicable ADR/RID: IĬĬ IMDG: III IATA: III 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

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

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Chemical name	Common names and synonyms	CAS number	EC number
1,3-Dibromopropane	1,3-Dibromopropane	109-64-8	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			Not Listed.
New Zealand Inventory of Chem	icals (NZloC)		Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Not Listed.
Chinese Chemical Inventory of E	Existing Chemical Substances (China IECSC)		Listed.

## Section 16: Other Information

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.