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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers

Product Name Barium oxide, 99.99% Product Code B 1342 CAS No: 1304-28-5

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 No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

1.4. Emergency telephone number Phone no. : + 91 98200 41841 (10 : 00 am - 06 : 00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 4), H332 Skin corrosion (Sub-category 1B), H314 Serious eye damage (Category 1), H318 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 Danger Hazard statement(s) H301 Toxic if swallowed. Causes severe skin burns and eye damage. H314 H332 Harmful if inhaled. Precautionary statement(s) Do not breathe dust. P260 Use only outdoors or in a well-ventilated area. P271 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. IF ON SKIN (or hair): Take off immediately all contaminated P303 + P361 + P353 clothing. Rinse skin with water. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Supplemental Hazard none Statements Reduced Labeling (<= 125 ml) Pictogram Signal Word Danger Hazard statement(s) H301 Toxic if swallowed. H314 Causes severe skin burns and eye damage. Precautionary statement(s) P260 Do not breathe dust. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated

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P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable			
	for breathing. Immediately call a POISON CENTER/ doctor.			
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes.			
	Remove contact lenses, if present and easy to do. Continue			
	rinsing.			
· · · · · · ·	This is a second 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.				
5				

clothing Rinse skin with water

SECTION 3: Composition/information on ingredients

Formula Molecular weight CAS-No. EC-No.	: BaO : 153,33 g/mo : 1304-28-5 : 215-127-9		
Component		Classification	Concentration
bariumoxide			
CAS-No. 1304-28-5		Acute Tox. 3; Acute Tox. 4; Skin Corr. 1B;	<= 100 %
EC-No. 215-127-9		Eye Dam. 1; H301, H332, H314, H318	

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

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately

apply artificial respiration, if necessary also oxygen. In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

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

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given. For this

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substance/mixture no limitations of extinguishing agents are given. 5.2 Special hazards arising from the substance or mixture Barium oxide Not combustible. Ambient fire may liberate hazardous vapours. 5.3 Advice for firefighters Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. 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. 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 carefully. 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 Advice on safe handling Work under hood. Do not inhale substance/mixture. Hygiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Handle and store under inert gas. Air sensitive. Moisture sensitive. Storage class Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects 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). Tightly fitting safety goggles Body Protection protective clothing 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

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the used respiratory protection system. Recommended Filter type: Filter type P3 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) Physical state c) Odor No data available

No data available

No data available

No data available

Not applicable

No data available

none

5,72 g/cm3 at 25 °C - lit.

The product is not flammable.

Viscosity, kinematic: No data available Viscosity, dynamic: No data available

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) Partition coefficient: n-octanol/water o) Vapor pressure p) Density Relative density q) Relative vapor density r) Particle characteristics s) Explosive properties t) Oxidizing properties 9.2 Other safety information No data available

SECTION 10: Stability and reactivity

10.1 Reactivity No data available
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 Avoid moisture.
no information available
10.5 Incompatible materials acids, Acid chlorides, Acid anhydrides, Reducing agents
10.6 Hazardous decomposition products In the event of fire: see section 5

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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 Chronic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological inf	ormation	
12.1 Toxicity		
No data available		
12.2 Persistence and degrada	ability	
No data available		
12.3 Bioaccumulative potentia	al	
No data available		
12.4 Mobility in soil		
No data available		
12.5 Results of PBT and vPvI	3 assessment	
This substance/mixture conta	ins no components considered to be eit	ther persistent.
	BT), or very persistent and very bioaccu	
levels of 0.1% or higher.	,	
12.6 Endocrine disrupting pro	perties	
Product:		
Assessment :	The substance/mixture does not conta	ain components
	considered to have endocrine disruptir	
	according to REACH Article 57(f) or C	
	Delegated regulation (EU) 2017/2100	
	Regulation (EU) 2018/605 at levels of	0.1% or higher
12.7 Other adverse effects	regulation (EO) 2010/000 at levels of	
No data available		
SECTION 13: Disposal cons	iderations	
13.1 Waste treatment method		
No data available		
NO data avallable		
SECTION 14: Transport info	rmation	
14.1 UN number	initation in the second se	
ADR/RID: 1884	IMDG: 1884	IATA: 1884
		IATA. 1004
14.2 UN proper shipping nam ADR/RID:	BARIUM OXIDE	
IMDG:	BARIUM OXIDE	
IATA:		
14.3 Transport hazard class(e		
ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1
14.4 Packaging group		
ADR/RID: III	IMDG: III	IATA: III
14.5 Environmental hazards		
ADR/RID: no	IMDG Marine pollutant: no	IATA: no
14.6 Special precautions for u	iser	
Tunnel restriction code : (E)		
Further information : No data	available	

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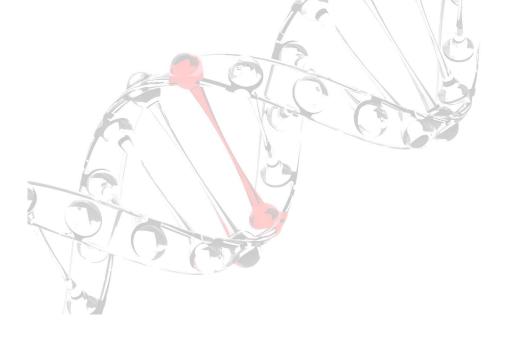
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SECTION 15: Regulatory information

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.
Other regulations
Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.
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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