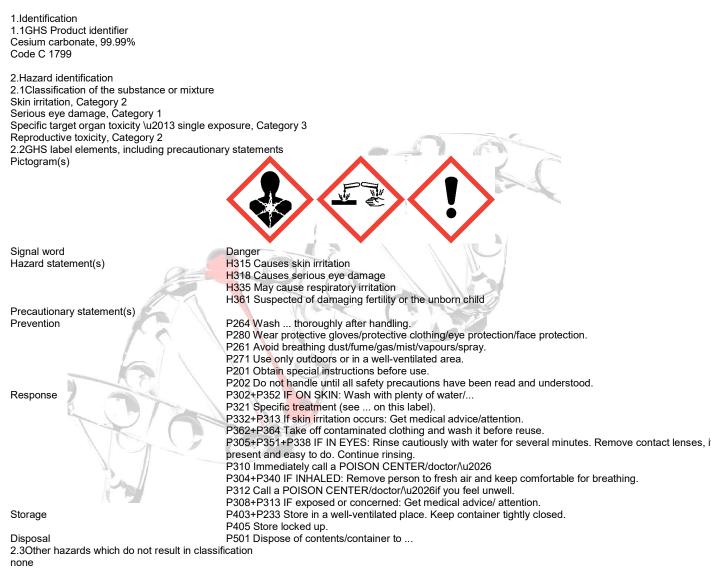
OTTO CHEMIE PVT LTD

MATERIAL SAFETY DATA SHEET



3.Composition/information on ingredients

3.1Substances	-			
Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Cesium carbonate	Cesium carbonate	534-17-8	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 eye 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). 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 white crystalline powder no data available Colour Odour no data available 4\u00b0C(lit.) Melting point/ freezing point 146\u00b0C Boiling point or initial boiling point and boiling range Flammability no data available Lower and upper explosion limit / flammability no data available limit 45\u00b0C(lit.) Flash point Auto-ignition temperature no data available Decomposition temperature no data available

pН Kinematic viscosity Solubility Partition coefficient n-octanol/water (log value) no data available Vapour pressure Density and/or relative density Relative vapour density Particle characteristics

no data available

4.072

In water:261 g/100 mL (20 \u00baC)

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 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 12.50ther 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: Not dangerous goods.	IMDG: Not dangerous goods.	IATA: Not dangerous goods.					
14.2UN Proper Shipping Name							
ADR/RID: unknown							
IMDG: unknown							
IATA: unknown 14.3Transport hazard class(es)							
ADR/RID: Not dangerous goods.	IMDC: Not depressive goods	IATA: Not dangerous goods.					
14.4Packing group, if applicable	IMDG: Not dangerous goods.	IATA. Not daligerous goods.					
ADR/RID: Not dangerous goods.	IMDG: Not dangerous goods.	IATA: Not dangerous goods.					
14.5Environmental hazards	INDO. NOLUANYELOUS YOUUS.	IATA. Not dangerous goods.					
ADR/RID: no	IMDG: no	IATA: no					
14.6Special precautions for user		17(17), 110					
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 environmenta	al regulations specific for the product in question						
Chemical name	Common names and synonyms	CAS number	EC number				
Cesium carbonate	Cesium carbonate	534-17-8	none				
	mercial Chemical Substances (EINECS)		Listed.				
EC Inventory			Listed.				
United States Toxic Substances Con	Listed.						
China Catalog of Hazardous chemica	Not Listed.						
New Zealand Inventory of Chemicals	Listed.						
Philippines Inventory of Chemicals a	Listed.						
	Vietnam National Chemical Inventory						
Chinese Chemical Inventory of Existi	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.