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: Lutetium(III) oxide, 99.99% Product Code: L 1668 CAS NO: 12032-20-1

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
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
2.2 Label elements
Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
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.

SECTION 3: Composition/information on ingredients

3.1 Substances	
Synonyms	: Cassiopeium oxide
Formula	: Lu2O3
Molecular weight	: 397,93 g/mol
CAS-No.	: 12032-20-1
EC-No.	: 234-764-3
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No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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.

5.2 Special hazards arising from the substance or mixture

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lutetium oxides 5.3 Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary. 5.4 Further information No data available **SECTION 6: Accidental release measures** 6.1 Personal precautions, protective equipment and emergency procedures Avoid dust formation. Avoid breathing vapors, mist or gas. For personal protection see section 8. 6.2 Environmental precautions No special environmental precautions required. 6.3 Methods and materials for containment and cleaning up Sweep up and shovel. Keep in suitable, closed containers for disposal. 6.4 Reference to other sections For disposal see section 13. **SECTION 7: Handling and storage** 7.1 Precautions for safe handling Advice on protection against fire and explosion Provide appropriate exhaust ventilation at places where dust is formed. Hygiene measures General industrial hygiene practice. For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Air sensitive. Storage class Storage class (TRGS 510): 13: Non 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). Skin protection 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 Regulation (EU) 2016/425 and the standard EN 374 derived from it. Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which

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differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

No special environmental precautions required.

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) Úpper/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) 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 ReactivityNo data available10.2 Chemical stabilityStable under recommended storage conditions.10.3 Possibility of hazardous reactions

powder white No data available No data available

No data available

No data available

No data available

Not applicable No data available

No data available

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

No data available 9,42 g/cm3 at 25 °C - lit. No data available No data available

No data available

No data available No data available

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No data available 10.4 Conditions to avoid Avoid moisture. 10.5 Incompatible materials Strong oxidizing agents, Carbon dioxide (CO2) 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. Eff Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg, Inhalation LC50 Rat: > 50mg/L. Chronic Effects on Humans: CARCINOGENIC EFFECTS: 0 Other Toxic Effects on Humans: Hazardous in case of skin Special Remarks on Toxicity to Animals: Not available. Special Remarks on Chronic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on other Toxic Effects on Humans: Not availa Special Remarks on ther Toxic Effects on Humans: Not availa Special Remarks on the Toxic Effects on Humans: Not availa Special Remarks on the Toxic Effects on Humans: Not availa Special Remarks on the Toxic Effects on Humans: Not availa Special Remarks on the Toxic Effects on Humans: Not availa Special Remarks on the Toxic Effects on Humans: Not availa Special Remarks on the Toxic Effects on Humans: Not availa Special Remarks on the Toxic Effects on Humans: Not availa Special Remarks on the Toxic Effects on Humans: Not available 10.0 Devisiones and dependent Humans	kg Classified None. by NTP, None. by OSHA, None. by contact (irritant), of inhalation (lung irritant).	NIOSH.
 12.2 Persistence and degradability No data available 12.3 Bioaccumulative potential No data available 12.4 Mobility in soil No data available 12.5 Results of PBT and vPvB assessment This substance/mixture contains no components considere bioaccumulative and toxic (PBT), or very persistent and ver levels of 0.1% or higher. 12.6 Endocrine disrupting properties No data available 12.7 Other adverse effects No data available SECTION 13: Disposal considerations 13.1 Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed dis Contaminated packaging 	y bioaccumulative (vPvB) at	
Dispose of as unused product. SECTION 14: Transport information 14.1 UN number ADR/RID: - 14.2 UN proper shipping name ADR/RID : Not dangerous goods IMDG : Not dangerous goods IATA : Not dangerous goods	IMDG: -	IATA: -
14.3 Transport hazard class(es) ADR/RID: -	IMDG: -	IATA: -
14.4 Packaging group ADR/RID: - 14.5 Environmental hazards	IMDG: -	IATA: -
ADR/RID: no 14.6 Special precautions for user Further information	IMDG Marine pollutant: no	IATA: no
Not classified as dangerous in the meaning of transport reg	ulations.	

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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.

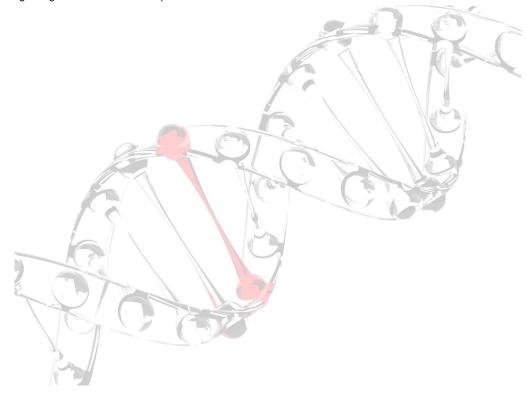
1907/2006.

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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