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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Lead monoxide powder, <10 µm, ≥99.9% trace metals basis Product Code: L 3036 CAS No : 1317-36-8

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 <u>info@ottokemi.com</u>

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 Acute toxicity, (Category 4) Acute toxicity, (Category 4) Carcinogenicity, (Category 2) Reproductive toxicity, (Category 1A) Effects on or via lactation Specific target organ toxicity repeated exposure, (Category 1), Central nervous system. Kidney Blood Short-term (acute) aquatic hazard, (Category 1) Long-term (chronic) aquatic hazard, (Category 1) 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Hazard Statements H302 + H332 H351 H360Df H362 H372

H302: Harmful if swallowed.
H332: Harmful if inhaled.
H351: Suspected of causing cancer.
H360Df: May damage the unborn child.
Suspected of damaging fertility.
H362: May cause harm to breast-fed children.
- H372: Causes damage to organs through prolonged or repeated exposure.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

Danger

Harmful if swallowed or if inhaled. Suspected of causing cancer. May damage the unborn child. Suspected of damaging fertility. May cause harm to breast-fed children. Causes damage to organs (Central nervous system, Kidney, Blood) through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects. Do not breathe dust. Avoid contact during pregnancy and while nursing. Avoid release to the environment. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. IF exposed or concerned: Get medical advice/ attention. none

DISCLAIMER

Statements

H410

P260 P263

P273

P301 + P312

P308 + P313

P304 + P340 + P312

Supplemental Hazard

Precautionary Statements

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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
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

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water/ shower. Consult a physician. In case of eye contact After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses. If swallowed After swallowing: immediately make victim drink water (two glasses at most). Consult a physician. 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 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. 5.2 Special hazards arising from the substance or mixture Lead oxides 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 Suppress (knock down) gases/vapors/mists with a water spray jet. 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 generation and inhalation of dusts in all circumstances. 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.

Storage class Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

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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 eve protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses Skin protection This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet. supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L 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 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 powder vellowlight yellow b) Color c) Odor odorless d) Melting Melting point/ range: 886 °C - lit. point/freezing point e) Initial boiling point > 600 °C at ca.1.013 hPa - OECD Test Guideline 103 and boiling range 1.470 °C The product is not flammable. f) Flammability (solid, gas) g) Upper/lower No data available flammability or explosive limits h) Flash point Not applicable

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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

No data available

No data available

8 - 9 at 100 g/l at 20 °C (slurry) Viscosity, kinematic: No data available Viscosity, dynamic: No data available 0,0702 g/l at 20 °C - OECD Test Guideline 105- slightly soluble Not applicable for inorganic substances

No data available 9,530 g/cm3 at 20 °C 9,96 at 22,5 °C - OECD Test Guideline 109

No data available

Not classified as explosive. none

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 Risk of explosion with: Aluminum Powdered metals performic acid perchloric acid glycerol Violent reactions possible with: carbides Sulfur oxides hydrogen peroxide halogens alkenes Risk of ignition or formation of inflammable gases or vapours with: Boron Alkali metals hydrides silanes vegetable/animal oils Fluorine 10.4 Conditions to avoid no information available 10.5 Incompatible materials No data available 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. 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.

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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 information** 12.1 Toxicity Toxicity to fish static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,1 mg/l -96 h Remarks: (ECHA) Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 0,13 mg/l - 48 h Remarks: (ECOTOX Database) Toxicity to algae static test EC10 - Skeletonema costatum (marine diatom) - 0,0294 mg/l - 96 h Remarks: (ECHA) Toxicity to fish(Chronic toxicity) semi-static test NOEC - Pimephales promelas (fathead minnow) 1,33 mg/l - 7 d Remarks: (ECHA) Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) semi-static test NOEC - Ceriodaphnia dubia (water flea) - 0,0224 mg/l - 7 d (US-EPA) 12.2 Persistence and degradability The methods for determining the biological degradability are not applicable to inorganic substances. Biodegradability Result: - According to the results of tests of biodegradability this product is not readily biodegradable. 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 considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. 12.6 Endocrine disrupting properties Product[.] Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. 12.7 Other adverse effects Discharge into the environment must be avoided. **SECTION 13: Disposal considerations** 13.1 Waste treatment methods

No data available

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SECTION 14: Transport information

14.1 UN number		
ADR/RID: 3077	IMDG: 3077	IATA: 3077
		IATA. 3077
14.2 UN proper shipping name		
	ARDOUS SUBSTANCE, SOLID, N.O.S. (lead(II) o	
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (lead(II) oxide)		
	substance, solid, n.o.s. (lead(II) oxide)	
14.3 Transport hazard class(es)		
ADR/RID: 9	IMDG: 9	IATA: 9
14.4 Packaging group		
ADR/RID: III	IMDG: III	IATA: III
14.5 Environmental hazards		
ADR/RID: yes	IMDG Marine pollutant: yes	IATA: yes
14.6 Special precautions for user		
Tunnel restriction code : (-)		
Further information		
	2 10 2) for single peakerings and	
EHS-Mark required (ADR 2.2.9.1.10, IMDG code		ALCON TO A
combination packagings containing inner packagings with Dangerous Goods > 5L for liquids		
or > 5kg for solids.Packages smaller than or equal to 5 kg / L , not dangerous goods of		
Class 9		
14.7 Maritime transport in bulk according to IMO	instruments	
Not applicable for product as supplied.		
SECTION 15: Regulatory information		
15.1 Safety, health and environmental regulation	s/legislation specific for the	A A
substance or mixture		
This material safety data sheet complies with the requirements of Regulation (EC) No.		
1907/2006.		
Authorisations and/or restrictions on use		
REACH - Restrictions on the manufacture.		
placing on the market and use of certain		
dangerous substances, mixtures and articles		
(Annex XVII)		
: lead(II) oxide		
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dangerous substances, mixtures and articles		
(Annex XVII)		
: lead(II) oxide		
REACH - Candidate List of Substances of Very		
High Concern for Authorisation (Article 59).		
: lead(II) oxide		
National legislation		
Seveso III: Directive 2012/18/EU of the		
European Parliament and of the Council		
on the control of major-accident hazards		
involving dangerous substances.		
E1 ENVIRONMENTAL HAZARDS		
Other regulations		
	otection in accordance to Dir 92/85/FEC or	
Observe work restrictions regarding maternity pre- stricter national regulations where applicable.	otection in accordance to Dir 92/85/EEC or	

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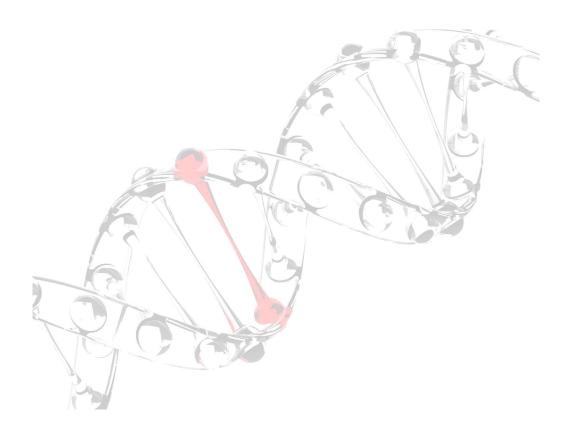
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Take note of Dir 94/33/EC on the protection of young people at work. 15.2 Chemical Safety Assessment For this product a chemical safety assessment was not carried out

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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