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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Tellurium powder, -100 mesh, 99.99% Product Code: T 3069 CAS No : 13494-80-9 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 Classification according to Regulation (EC) No 1272/2008 Acute toxicity, Inhalation (Category 4), H332 Skin sensitization (Sub-category 1B), H317 Reproductive toxicity (Category 1B), H360Df Effects on or via lactation, H362 Long-term (chronic) aquatic hazard (Category 4), H413 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) H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H360Df May damage the unborn child. Suspected of damaging fertility. H362 May cause harm to breast-fed children. H413 May cause long lasting harmful effects to aquatic life. Precautionary statement(s) P260 Do not breathe dust. P263 Avoid contact during pregnancy and while nursing. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. P308 + P313 IF exposed or concerned: Get medical advice/ attention. Supplemental Hazard Statements none Reduced Labeling (<= 125 ml) Pictogram Signal Word Danger Hazard statement(s) H317 May cause an allergic skin reaction. H362 May cause harm to breast-fed children. H413 May cause long lasting harmful effects to aquatic life. H360Df May damage the unborn child. Suspected of damaging fertility. Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face

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protection. P308 + P313 IF exposed or concerned: Get medical advice/ attention. Supplemental Hazard Statements none 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. Ecological information: 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. Toxicological information: 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. **SECTION 3: Composition/information on ingredients** 3.1 Substances Formula : Te Molecular weight : 127,6 g/mol CAS-No.: 13494-80-9 EC-No.: 236-813-4 Component Classification Concentration tellurium CAS-No. 13494-80-9 Acute Tox. 4; Skin Sens. <= 100 % EC-No. 236-813-4 1B; Repr. 1B; Lact. Aquatic Chronic 4; H332, H317, H360Df, H362, H413

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

water/ shower. Consult a physician. In case of eve 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

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For this substance/mixture no limitations of extinguishing agents are given. 5.2 Special hazards arising from the substance or mixture Tellurium 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 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. 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). 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

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Otto Chemie Pvt Ltd - provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product

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Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L 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 Powder a) Physical state b) Color Gray c) Odor No data available d) Melting point/freezing point Melting point/range: 450 °C - lit. e) Initial boiling point and boiling range 990 °C - lit. UThe product is not flammable. f) Flammability (solid,gas) g) Upper/lower flammability or explosive limits No data available h) Flash point Not applicable i) Autoignition temperature No data available j) Decomposition temperature No data available k) pH No data available I) Viscosity Viscosity, kinematic: No data available Viscosity, dynamic: No data available 0,0017 g/l at 20 °C - OECD Test Guideline 105- slightly soluble m) Water solubility n) Partition coefficient: n-octanol/water Not applicable for inorganic substances o) Vapor pressure No data available p) Density 6,24 g/mL at 25 °C - lit. Relative density 6,232 q) Relative vapor density r) Particle *c*haracteristics No data available s) Explosive properties No data available t) Oxidizing properties None 9.2 Other safety information No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

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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 no information available 10.5 Incompatible materials Zinc, cadmium, Sodium/sodium oxides, Potassium, Strong acids, Strong bases, Halogens 10.6 Hazardous decomposition products In the event of fire: see section 5 **SECTION 11: Toxicological information** 11.1 Information on toxicological effects Acute toxicity LD50 Oral - Rat - male and female - > 5.000 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - male and female - 4 h - > 2,42 mg/l - aerosol (OECD Test Guideline 403) Dermal: No data available Skin corrosion/irritation Skin - reconstructed human epidermis (RhE) Result: No skin irritation (OECD Test Guideline 439) Serious eye damage/eye irritation Eyes - Chicken eye Result: No eye irritation (OECD Test Guideline 438) Respiratory or skin sensitization Local lymph node assay (LLNA) - Mouse Result: positive (OECD Test Guideline 429) Germ cell mutagenicity Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Chromosome aberration test in vitro Test system: Chinese hamster lung cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: negative Carcinogenicity No data available Reproductive toxicity May damage the unborn child. Suspected of damaging fertility. Studies indicating a hazard to babies during the lactation period Specific target organ toxicity - single exposure No data available Specific target organ toxicity - repeated exposure No data available Aspiration hazard No data available 11.2 Additional Information

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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. Repeated dose toxicity - Rat - male and female - Oral - 13 Weeks - NOAEL (No observed adverse effect level) - >= 100 mg/kg RTECS: WY2625000 Nausea, Headache, Vomiting, Central nervous system depression To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. The following applies to tellurium compounds in general: after oral uptake, the compound is mostly reduced to metallic tellurium and subsequently eliminated with the faeces (bluegrey). After inhalation or ingestion: metallic taste, dryness in mouth. Possible in extreme cases: gastrointestinal complaints, cyanosis, unconsciousness, collapse, in some cases risk of liver and kidney damage. **SECTION 12: Ecological information** 12.1 Toxicity Toxicity to fish semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (OECD Test Guideline 203) Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 5,79 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - > 11,7 mg/l 72 h (OECD Test Guideline 201) Toxicity to bacteria static test EC50 - activated sludge - 320 mg/l - 3 h (OECD Test Guideline 209) 12.2 Persistence and degradability The methods for determining biodegradability are not applicable to inorganic substances. 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 No data available **SECTION 13: Disposal considerations** 13.1 Waste treatment methods No data available

SECTION 14: Transport information

14.1 UN number

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| ADR/RID: - 14.2 UN proper shipping nam ADR/RID: Not dangerous good IMDG: Not dangerous goods IATA: Not dangerous goods | ds | IATA: - |
|--|---------------------------|----------|
| 14.3 Transport hazard class(e ADR/RID: - | es) IMDG: - | 14 7 4. |
| 14.4 Packaging group | IMDG: - | IATA: - |
| ADR/RID: - | IMDG: - | IATA: - |
| 14.5 Environmental hazards | | |
| ADR/RID: no | IMDG Marine pollutant: no | IATA: no |
| 14.6 Special precautions for user | | |
| No data available | | |
| Further information | | |
| Not classified as dangerous in the meaning of transport regulations. | | |

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.
Authorisations and/or restrictions on use
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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