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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Silicon pieces, 1-10 mm, 99.99999% Product Code: S 4603 CAS No : 7440-21-3 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 Flammable solids (Category 2), H228 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 Warning Hazard statement(s) H228 Flammable solid. Precautionary statement(s) P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/equipment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. Supplemental Hazard Statements none Reduced Labeling (<= 125 ml) Pictogram Signal Word Warning Hazard statement(s) none Precautionary statement(s) none 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.

SECTION 3: Composition/information on ingredients

3.1 Substances Formula : Si

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Molecular weight : 28,09 g/mol

CAS-No. : 7440-21-3 EC-No. : 231-130-8 No components need to be disclosed according to the applicable regulations. 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. In case of skin contact In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. In case of eye contact After eye contact: rinse out with plenty of water. Remove contact lenses. If swallowed After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell. 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 Water Foam Carbon dioxide (CO2) Dry powder Unsuitable extinguishing media For this substance/mixture no limitations of extinguishing agents are given. 5.2 Special hazards arising from the substance or mixture silicon oxides Combustible. Development of hazardous combustion gases or vapours possible in the event of fire. 5.3 Advice for firefighters In the event of fire, wear self-contained breathing apparatus. 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 inhalation of dusts. Avoid substance contact.
Ensure adequate ventilation. Keep away from heat and sources of ignition. 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. Risk of explosion.
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 dry. 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 protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary

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measures against static discharge.		
Hygiene measures		
Change contaminated clothing. Wash hands after working w	vith substance	
For precautions see section 2.2.		
7.2 Conditions for safe storage, including any incompatibilitie	86	
Storage conditions	5	
Tightly closed. Keep away from heat and sources of ignition		
Over time, pressure may increase causing containers to bur	st moisture sensitive. Store	
under nitrogen.		
Storage class		
Storage class (TRGS 510): 4.1B: Flammable solid hazardous materials		
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		
government standards such as NIOSH (US) or EN 166(EU). Safety glasses		
Body Protection		
Flame retardant antistatic 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	a standards relating to	
the used respiratory protection system.	g standards relating to	
Recommended Filter type: Filter type P1		
The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory		
protective devices are carried out according to the instructio	ns of the producer.	
These measures have to be properly documented.		
Control of environmental exposure	C. L	
Do not let product enter drains. Risk of explosion.		
SECTION 9: Physical and chemical properties		
9.1 Information on basic physical and chemical properties		
a) Physical state	Pieces	
b) Color	No data available	
c) Odor	odorless	
d) Melting		
point/freezing point		
Melting point/range:	1.410 °C - lit.	
	1:410 O - III.	
e) Initial boiling point		
and boiling range	2.355 °C - lit.	
f) Flammability (solid,gas)	The substance or mixture is a flammable solid with the category 2.	
g) Upper/lower		
flammability or		
explosive limits	No data available	
h) Flash point	Not applicable	
i) Autoignition		
temperature	900 °C	
j) Decomposition		
temperature	No data available	
k) pH	No data available	
I) Viscosity Viscosity, kinematic:	No data available	
	No data available	
Viscosity, dynamic:		
m) Water solubility	0,1 g/l at 20 °C - OECD Test Guideline 105- insoluble	
n) Partition coefficient:		
n-octanol/water	Not applicable for inorganic substances	

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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 Minimum ignition Energy	No data available 2,33 g/mL at 25 °C - lit. No data available No data available No data available No data available None 250 mJ	
SECTION 10: Stability and reactivity 10.1 Reactivity The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. 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 Strong oxidizing agents, Alkali carbonates, Calcium, cobalt difluoride, manganese trifluoride 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 Dermal - Ratb 1: 3.160 mg/kg Remarks: (RTECS) Inhalation: No data available LD50 Dermal - Rabbit > 5.000 mg/kg Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: synthetic amorphous silica, pptd. Skin corrosion/irritation No data available Serious eye damage/eye irritation Eyes - Rabbit Result: Mild eye irritation - 24 h (Draize Test) Respiratory or skin sensitization No data available Germ cell mutagenicity No data available Carcinogenicity No data available Specific target organ toxicity - single exposure No data available Specific target organ toxicity - repeated exposure No data available Aspiration hazard No data available		

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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. RTECS: VW0400000 To the best of our knowledge, the chemical, physical, and toxicological been thoroughly investigated.	al properties have not
SECTION 12: Ecological information 12.1 Toxicity No data available 12.2 Persistence and degradability The methods for determining biodegradability are not applicable to inc 12.3 Bioaccumulative potential No data available 12.4 Mobility in soil No data available 12.5 Results of PBT and vPvB assessment	organic substances.
This substance/mixture contains no components considered to be eith bioaccumulative and toxic (PBT), or very persistent and very bioaccur 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 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 ADR/RID: 1346 IMDG: 1346 14.2 UN proper shipping name ADR/RID: SILICON POWDER, AMORPHOUS IMDG: SILICON POWDER, AMORPHOUS IATA: Silicon powder, amorphous 14.3 Transport hazard class(es)	IATA: 1346
ADR/RID: 4.1 IMDG: 4.1 14.4 Packaging group	IATA: 4.1
ADR/RID: III IMDG: III 4.5 Environmental hazards	IATA: III
ADR/RID: no 14.6 Special precautions for user Tunnel restriction code : (E) Further information : No data available	IATA: no

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

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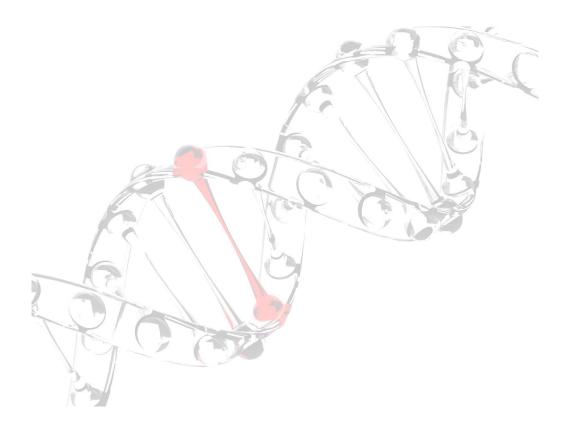
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precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.



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