MATERIAL SAFETY DATA SHEET (MSDS)

Product Name: Silicon Dioxide Nanoparticles
Product Series: SiO_2 -NANO

1. Product And Company Identification

1.1 Product identifiers

Product Name: Silicon dioxide SiO_2
Brand: Techinstro
CAS-No.: 7631-86-9

1.2 Relevant identified uses of the substance along with the uses advised against

Identified Uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the Supplier

Company: M/s. Techinstro
Plot No. - 463, Yadav Nagar
Nagpur, Maharashtra, India
Pin Code- 440026
Emergency Contact: +91(0) 8007799090
Emergency Contact Email: info@techinstro.com

2.Hazards Identification

2.1 Classification of the substance

GHS Classification following the 29 CFR 1910 (OSHA HCS)
Eye irritation (Category 2A), H319
Respiratory system, H335
For the full text of the H-Statements, see Section 16.

2.2 GHS Label elements, including precautionary statements

Signal word Warning
Hazard statement(s)
H319 Causes severe eye irritation.
H335 May cause respiratory irritation.

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Precautionary statement(s) P261
P305 + P351 + P338 IF IN EYES:
Rinse properly with water for a certain number of minutes.
Remove contact lenses if present. Continue rinsing.

P312 Call a doctor/ physician if you feel unwell.
P337 + P313 If eye irritation exists: Get medical advice/ attention.
P403 + P233 Store in a well-ventilated place. Keep the container tightly closed.
P405 Store locked up.
P501 Dispose of contents to an approved waste
Avoid breathing its dust/ fume/ gas/ mist/vapors/ spray.
P264 Wash skin after handling the product.
P271 Always Use only outdoors or in a well-ventilated place.
P280 Always wear protective gloves/ eye protection/ face protection.
P304 + P340 IF INHALED: Remove the victim to fresh air and keep in a position comfortable for breathing—disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
None

3. Composition/Information On Ingredients

3.1 Substances Synonyms:
Silicon (Si) CAS#: 7440-21-3

Hazardous components
Component: Silicon (Si) Powder
Classification: Eye Irritation 2A; STOT SE 3; H319, H335
Concentration: For the full text of the H-Statements mentioned in this Section, refer to Section 16.

4. First-Aid Measures

4.1 Description of first aid measures

If inhaled
If breathed in, move the person into the fresh air. If not breathing, then give artificial respiration.

In case of skin contact
Wash off with soap along with plenty of water.

In the case of eye contact
Flush the eyes with water as a precaution.

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If swallowed
If a person is unconscious, do not give them anything to eat or drink by mouth. Instead, rinse their mouth with water.

4.2 Most important symptoms, effects, both acute as well as delayed
The most crucial known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11

4.3 Indication that any immediate medical attention or any special treatment is needed
No data available

5. Firefighting Measures

5.1 Extinguishing media
To extinguish fires, you can use water spray, alcohol-resistant foam, dry chemicals, or carbon dioxide.

5.2 Special hazards (dangers) arising from the substance or mixture
The product is not flammable

5.3 Advice for Firefighters
Wear self-contained breathing apparatus (uniform) for firefighting if necessary.

5.4 Further information no data available

6. Accidental Release Measures

6.1 Personal Precautions/Preventions, Protective Equipment, and Emergency Procedures
Always use personal protective equipment. Avoid the following - dust formation, breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection, see section 8.

6.2 Environmental precautions
Do not let the product enter the drainage.

6.3 Methods and materials for containment as well as cleaning up
Sweep up and shovel. Also, please keep them in suitable and closed containers for disposal.

6.4 Reference to other sections
For disposal, kindly see section 13.

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7. Handling & Storage

7.1 Precautions for safe handling

Avoid contact with the skin and eyes. Avoid the formation of dust & aerosols. Provide proper exhaust ventilation at places/areas where dust is formed. For precautions, one can see section 2.2.

7.2 Conditions for safe storage, including any inconsistencies

You need to keep the container tightly closed in a dry and well-ventilated place.

7.3 Specific end use/uses

Apart from the uses which are mentioned in section 1.2, no other specific uses are set out.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters
Contains no substances/mixtures with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls
Handle following good industrial hygiene & safety practices. Wash your hands before breaks and at the end of the workday.

Personal protective equipment

Eye/face protection
Wear safety glasses with side shields that meet EN166 standards when using eye protection equipment approved by relevant government agencies like NIOSH or EN 166 to stay safe.

Skin protection

For any handling steps where the substance is in particulate form or in a suspension with pure water where the substance is not solubilized, the gloves must be comprised of material that successfully passes ASTM F-1671. For any handling steps where the substance is part of a carrier liquid other than the aqueous suspension noted in the previous paragraph, gloves must be comprised of material that successfully passes ASTM F-739 (continuous liquid contact method). Gloves must be changed before they show degradation and before the designated breakthrough time for the carrier liquid (as determined by the ASTM F-739 testing or by the manufacturer). Please handle this product with gloves and be sure to inspect them before use. When removing gloves, please use proper technique to avoid touching the outer surface, which may be contaminated. After use, dispose of the gloves under applicable laws and good laboratory practices. Please wash and dry your hands thoroughly afterward.

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Body Protection
Impervious clothing, the type of protective equipment/uniform must be selected according to the concentration as well as the amount of the dangerous substance at the specific workplace.

Respiratory protection
The EPA mandates using full-face respirators with minimum N100-grade cartridges if there is any risk of exposure to dust. Use type P95 (US) or else type P1 (EU EN 143) particle respirator for nuisance exposures. For higher level protection, use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) When using respirators, ensure that you use cartridges and components that have been tested and approved by the appropriate government standards such as NIOSH (US) or CEN (EU). It is essential to control environmental exposure by avoiding the disposal of products in drains.

9. Physical & Chemical Properties

9.1 Details on basic physical and chemical properties

a. Appearance: Solid
b. Odor: no data available
c. Odor Threshold: no data available
d. pH: no data available
e. Melting point/freezing point: 1440 °C
f. Initial boiling point & boiling range: no data available
g. Flashpoint: no data available
h. Evaporation rate: no data available
i. Flammability (solid, gas): no data available
j. Upper/lower flammability, explosive limits: no data available
k. Vapor pressure: no data available
l. Vapor density: no data available
m. Relative density: 2.33
n. Water solubility: insoluble
o. Partition coefficient - octanol/water: no data available
p. Auto-ignition temperature: no data available
q. Decomposition temperature: no data available
r. Viscosity: no data available
s. Explosive properties: no data available
t. Oxidizing properties: no data available

9.2 Other Safety Details

no data available

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10 Stability & Reactivity

10.1 Reactivity
no data available

10.2 Chemical Stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous (dangerous) reactions no data available

10.4 Conditions to avoid no data available

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - no data available
At the occurrence of fire: see section 5

11. Toxicological Information

11.1 Information on toxicological effects
Acute toxicity no data available Inhalation: no data available
Dermal: no data available. Skin corrosion/irritation no data available
Severe eye damage/ irritation
no data available
Respiratory or skin sensitization
no data available
Germ cell mutagen city
no data available
Carcinogenicity
no data available
Reproductive toxicity no data available
Specific target organ toxicity - single exposure
Inhalation - This may cause respiratory irritation.
Specific/Particular target organ toxicity - repeated exposure, no data available

Aspiration hazards no data available Additional Information
RTECS: Not available
To our knowledge, the chemical, physical, and toxicological properties have yet to be thoroughly investigated.

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12. Ecological Details

12.1 Toxicity
No data available

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
PBT/vPvB assessment is not available as chemical safety assessment is not required

12.6 Other adverse effects
No data available

13. Disposal Considerations

13.1 Waste treatment methods
Product
Offer surplus & non-recyclable solutions to a licensed disposal company. Contact a proper professional waste disposal service to
dispose of this material. Contaminated packaging Dispose of as an unused product.

14. Transport Information

DOT (US)
Not dangerous goods
IMDG
Not dangerous goods
IATA
Not dangerous goods

15. Regulatory Information

SARA 302 Components/Ingredients

SARA 302: No chemicals in the mentioned material are subject to SARA Title III reporting requirements in Section 302.
SARA 313 Components

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SARA 313: According to SARA Title III, Section 313, this substance does not contain any chemical components that surpass the reporting levels established by De Minimis and have known CAS numbers. Therefore, it poses no hazards per SARA 311/312 guidelines.

16. Other Information

The information presented here is believed to be accurate as of the above date and is provided in good faith. However, no warranty, whether express or implied, is given. The client's responsible for ensuring its activities comply with the relevant laws.