

1. Identification of the Product and Supplier

Product name: **SioxX[®]**

Product application: Production of unshaped refractories

Address/Phone No.: **Elkem ASA, Silicon Products**
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REACH registration number: 01-2119480401-47-0065

REACH and CLP helpdesk: REACH and CLP website:
<https://echa.europa.eu/support/helpdesks/>

Emergency Phone No.: not applicable for non-hazardous substances.

2. Hazards Identification

Classification of the substance The product does not meet the criteria for hazard classification according to Regulation (EC) No1272/2008 (CLP) and the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 9th rev.).

Hazard pictogram: N/A (not applicable)

Signal word: N/A (not applicable)

Hazard statements: N/A (not applicable)

Precautionary statements: N/A (not applicable)

The product may contain small amounts of crystalline quartz (< 0.5 %).
The amount of respirable crystalline silica (< 0.1 %) does not trigger hazard classification of the product.

3. Composition/Information on Ingredients

Synonyms: -

IUPAC-name: -

Constituents

| CHEMICAL NAME | CAS # | EINECS # | % w/w |
|---|------------|-----------|---------|
| Silicon Dioxide (amorphous silica fume) | 69012-64-2 | 273-767-1 | 60-80 |
| Aluminium oxide (Al ₂ O ₃), non-respirable | 1344-28-1 | 215-691-6 | 15-30 |
| Proprietary additives, not hazard-classified | | | Balance |

The product meets the criteria as a nanoform in accordance with Commission Recommendation 2011/696/EU.

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4. First Aid Measures

Inhalation: Remove exposed person from dusty area. Fresh air.
Skin contact: Wash contaminated skin with water and/or a mild detergent.
Eye contact: Rinse eyes with water/saline solution. If discomfort persists, obtain medical attention.
Ingestion: Not applicable.

5. Fire Fighting Measures

The product is not combustible and there is no inherent risk of explosion.

Extinguishing media: Not applicable. Depending on surrounding fire.

6. Accidental Release Measures

Avoid exposure to dust of the product. Released material should be collected in suitable containers.

7. Handling and Storage

Handling: Avoid dust generation. See section 8.
Storage: Keep in a dry place away from hydrofluoric acid (HF).
Not to be stored at temperatures near to or below 0 °C.

8. Exposure Controls/Personal Protection

A) A) Occupational exposure controls:

Avoid inhalation of dust. Ensure good dust ventilation during use. Wear a CE-marked respirator according to EN 149 FFP 2S/3S during dust generating operations. Use protective gloves and eye protection. Facilities for eye flushing should be available.



Occupational Exposure Limits (ACGIH ¹⁾, 2016):

| Substance | [CAS No.] | 8hr TWA | | ACGIH TLV 15 minute STEL | | Notations |
|--|--------------|---------|-------------------------------------|-----------------------------|-------------------|-----------|
| | | ppm | mg/m ³ | ppm | mg/m ³ | |
| PNOS ²⁾ | - | - | 10 ^(I) /3 ^(R) | - | - | - |
| Aluminium metal [7429-90-5] and insoluble compounds | - | - | 1 ^(R) | - | - | A4 |
| Silica, crystalline (SiO ₂) Quarz* | [14808-60-7] | - | 0.025 ^(R) | - | - | A2 |
| Cristobalite* [14464-46-1] | [14464-46-1] | - | 0.025 ^(R) | - | - | A2 |

¹⁾ American Conference of Governmental Industrial Hygienists

²⁾ Particulates (Insoluble or Poorly Soluble) Not Otherwise Specified. Amorphous silica fume is considered to be PNOS. Specific TLVs for the individual substances have not been established or have been withdrawn, respectively.

^(I) Inhalable fraction

^(R) Respirable fraction

B) Environmental exposure controls

Limit value for PM₁₀ and PM_{2.5} (Directive 2008/50/EC):

| | Averaging period | Limit value |
|-------------------|------------------|------------------------|
| PM ₁₀ | One day | 50 µg/m ³ ★ |
| PM ₁₀ | Calendar year | 25 µg/m ³ |
| PM _{2.5} | Calendar year | 15 µg/m ³ |

★Not to be exceeded more than 30 times a calendar year.

9. Physical and Chemical Properties

| | |
|--|----------------------------|
| Form: | Powder |
| Colour: | Grey |
| Odour: | Odourless |
| Solubility (Water): | Insoluble/Slightly soluble |
| Solubility (Organic solvents): | Insoluble/Slightly soluble |
| pH value (10 % dispersion): | 5-7 |
| Bulk density (kg/m ³) approx.: | 400-650 |

10. Stability and reactivity

Conditions to avoid: See below

Materials to avoid: Hydrofluoric acid (HF).

Hazardous Decomposition Product(s):

The product reacts with hydrofluoric acid (HF) forming toxic gas (SiF₄).

Heating the product above 1000 °C can result in the formation of crystalline SiO₂-modifications as cristobalite / tridymite which may cause pulmonary fibrosis (silicosis).

11. Toxicological Information

The product does not meet the criteria for hazard classification according to Regulation (EC) No 1272/2008 (CLP) and the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 9th rev.).

Acute effects:

| | |
|---------------|--|
| INGESTION: | Finely divided dust may cause mechanical irritation and dehydration of mucous membranes. |
| INHALATION: | Finely divided dust may cause mechanical irritation and dehydration of mucous membranes. The classification criteria as respiratory irritant (STOT SE3) are not met. |
| SKIN CONTACT: | Finely divided dust may cause mechanical irritation and dehydration. |
| EYE CONTACT: | Finely divided dust may cause mechanical irritation and dehydration. |

Chronic effects:

Chronic obstructive lung disease is suspected following long term exposure (years) for concentrations above recommended occupational exposure limits (see section 8).

Endocrine disrupting properties: The product is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU)2017/2100 or Commission Regulation (EU)2018/605.

12. Ecological Information

The product is not characterised as dangerous for the environment.

| | |
|------------------|---|
| MOBILITY: | The product is not mobile under normal environmental conditions. |
| PERSISTENCE: | Not relevant for inorganic substances. |
| BIOACCUMULATION: | Not relevant. |
| ECOTOXICITY: | The product does not meet the classification criteria for ecotoxicological endpoints in accordance with Regulation (EC) 1272/2008 (CLP) and the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 9 th rev.). |

Endocrine disrupting properties: The product is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU)2017/2100 or Commission Regulation (EU)2018/605.

13. Disposal Considerations

The material should be recovered for recycling if possible.

This material is not classified as hazardous waste according to Commission Decisions 2000/532/EC and 2001/118/EC. Prior to disposal of large quantities of this material advice should be sought from the Environment Agency Office.

14. Transport Information

| | |
|-----------|-------------------------------|
| UN | - |
| IMDG/IMO | Not subject to classification |
| ADR/RID | Not subject to classification |
| ICAO/IATA | Not subject to classification |

15. Regulatory Information

The text of this Product Safety Information is prepared in compliance with:

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and subsequent amendments.
- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
- UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS, 9th rev.).

16. Other Information

According to Chapter 1.5.2 of the UN Globally Harmonised System of classification and labelling of chemicals (GHS), Article 58 (2)(a), and Article 59(2)(b) of (EC) No 1272/2008 (CLP), which amends REACH article 31(1), safety data sheets (SDS) are only required for substances and mixtures that meet the harmonised criteria for physical, health or environmental hazards. This product does not meet these criteria.

Literature references are available upon request.

Changes from revision 00 to 01: new contact information (website and email, section 1), rewritten EDC assessment (section 11 & 12), Elkem ASA, added information nanoform (section 3)