

Product Safety Information

Microsilica



1. Identification of the substance / mixture and of the company / undertaking

1.1. Product Identifier

Product name:	Microsilica
REACH registration number:	01-2119486866-17-0048
CAS Number	69012-64-2
EC Number	273-761-1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Product application:	<ul style="list-style-type: none">- Production of mortars and castables.- Production of insulating materials.- Production of ceramic and refractory products.- Other industrial applications.
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1.3. Details of the supplier of the safety data sheet

Company name	PCC BakkiSilicon hf
Address	Bakkavegur 2 640 Húsavík, Iceland
Phone number	Phone: +3544640060
Website	www.pcc.is
Contact:	pccinfo@pcc.is

REACH and CLP helpdesk:	REACH Website: https://echa.europa.eu/home https://echa.europa.eu/support/helpdesks
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1.4. Emergency telephone number

Iceland	National emergency number: 112 Poisons Information Centre: +354 543 2222
Other countries	https://poisoncentres.echa.europa.eu/appointed-bodies

2. Hazards Identification

2.1. Classification of the substance or mixture

Classification of the substance:	The product does not meet the criteria for hazard classification in accordance with Regulation (EC) No. 1272/2008 (CLP).
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2.2. Label elements

Hazard pictogram:	N/A (not applicable)
Signal word:	N/A (not applicable)
Hazard statements:	N/A (not applicable)
Precautionary statements:	N/A (not applicable)

2.3. Other hazards

Silica fume may contain small amounts of crystalline quartz (< 0.5 %). The amount of respirable crystalline silica in the product is below 0.1% and does not trigger a hazard-classification

3. Composition/Information on Ingredients

Substance	Identification	Classification	Contents
Microsilica (A.K.A. Silica fume, amorphous silica (SiO ₂), Silicon dioxide powder	CAS No.: 69012-64-2 EC No.: 273-761-1 REACH No.: 01-2119486866-17-0003		94.5 - 97.5%

Silica fume may contain small amounts of crystalline quartz (< 0.5%).

4. First Aid Measures

4.1. Discription of first aid measures

Inhalation:	Remove person from Silica fume exposed areas.
Skin contact:	Wash contaminated skin with water and/or mild detergent
Eye contact:	Rinse eyes with water/saline solution. If discomfort persists, obtain medical attention.
Ingestion:	Remove the person affected from dust exposed area. See inhalation.

4.2. Most important symptoms and effects, both acute and delayed

Dust may cause irritation symptoms such as coughing and a sore throat, redness and watering of the eyes. May cause redness and itching upon skin-contact.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically

5. Fire Fighting Measures

5.1. Extinguishing media

Not applicable, depending on surrounding fire.

5.2. Special hazards arising from the substance or mixture

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

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid contact with eyes and skin. Use protective equipment as referred to in section 8.

6.2. Environmental precautions

Do not allow to enter into sewer, water system or soil.

6.3. Methods and material for containment and cleaning up

Avoid handling that generates dust build-up and exposure to silica fume. Released material should be collected in suitable containers. Use vacuum cleaner rather than sweeper.

6.4. Reference to other sections

See sections 8 and 13

7. Handling and Storage

7.1. Precautions for safe handling

Avoid dust dispersion. Wear protective clothing, gloves, suitable respiratory protection and goggles.

7.2. Conditions for safe storage, including any incompatibilities

Keep dry. Not to be stored at temperatures near to or below 0°C.

Keep away from hydrofluoric acid (HF). Reactions with HF leads to the formation of toxic gases (SiF₄).

7.3. Specific end use(s)

See section 1.2.

8. Exposure Controls/Personal Protection

8.1. Control Parameters

Occupational Exposure Limits (OEL)

Substance	Identification	Limit value (8h)	Country
Microsilica	CAS No.: 69012-64-2	2 mg/m ³	Iceland/Australia/Belgium/Canada/Denmark/South Africa
	EC No.: 273-761-1		
	REACH No.: 01-2119486866-17-0003	0.3 mg/m ³	Germany
Quarz	CAS No.: 14808-60-7	Total dust: 0.3 mg/m ³	Iceland
		Microdust: 0.1 mg/m	Iceland

National occupational exposure limits may vary. Users in other countries than listed in the table must comply with their respective national occupational exposure limits.

DNEL / PNEC

Substance	Identification	DNEL ¹
Microsilica	CAS No.: 69012-64-2 EC No.: 273-761-1 REACH No.: 01-2119486866-17-0003	0.3 mg/m ³

8.2. Exposure Controls

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



9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical state:

Ultrafine amorphous powder (respirable dust). Dust forms agglomerates.

Colour:	Grey, light grey.
Odour:	Odourless.
Melting point/freezing point (°C):	1550 - 1570
Boiling point/boiling range	Not relevant
Flammability	Nonflammable
Lower and upper explosion limit	Not relevant
Flash point	Not relevant
Auto-ignition temperature	Not relevant
Decomposition temperature	Not available
pH	Not relevant
Kinematic Viscosity	Not relevant
Solubility (Water):	Insoluble/slightly soluble.
Solubility (Organic solvents):	Insoluble/slightly soluble.
Partition coefficient n-octanol/water	Not relevant
Vapour pressure	Not relevant
Bulk density (kg/m ³):	≈ 150-700
Density (g/cm ³):	2.2 - 2.3
Relative vapour density	Not relevant
Particle characteristics	
Specific surface (m ² /g):	15 - 35
Particle size, mean (µm)	0.15 (less than 3 % of primary particles > 45 µm)

9.2. Other information

No other information

10. Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

The product is stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

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).

10.4. Conditions to avoid

High temperature

10.5. Incompatible materials

Hydrofluoric acid (HF)

10.6. Hazardous decomposition products

See section 10.5

11. Toxicological Information

11.1. Information on hazard classes as defined in regulation (EC) No 1272/2208

The product does not meet the criteria for hazard classification according to Regulation (EC) No. 1272/2008 (CLP).

Acute effects and symptoms of exposure:

Ingestion:	Finely divided dust may cause mechanical irritation of nose and dehydration of mucous membranes.
Inhalation:	Finely divided dust may cause mechanical irritation and dehydration of mucous membranes. Symptoms may include coughing and a sore throat.
Skin Contact:	Finely divided dust may cause mechanical irritation and dehydration. Symptoms may include redness and itching.
Eye Contact:	Finely divided dust may cause mechanical irritation and dehydration.

Chronic effects:

Inhalation of microsilica dust is considered to entail minimal risk of pulmonary fibrosis (silicosis). However, chronic obstructive lung disease is suspected following long term exposure (years) for concentrations above recommended occupational exposure limits.

11.2. Information on other hazards

Endocrine disrupting properties	None of the substances listed in section 3.2 are listed on ECHA's Endocrine disruptor assessment list
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12. Ecological Information

12.1. Toxicity

The product does not meet the classification criteria for ecotoxicological endpoints in accordance with Regulation (EC) 1272/2008 (CLP).

12.2. Persistence and degradability

Not relevant for inorganic substances.

12.3. Bioaccumulative potential

The potential of silica to bioconcentrate in aquatic species is low. Amorphous silica is known to be not bio concentrated or bio accumulated to soil dwelling organisms

12.4. Mobility in soil

The product is not mobile under normal environmental conditions.

12.5. Result of PBT and vPvP assessment

The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

None of the substances listed in section 3.2 are listed on ECHA's Endocrine disruptor assessment list.

12.7. Other adverse effects

No information

13. Disposal considerations

13.1. Waste treatment methods

The material should be recovered for recycling if possible. Dispose of waste product according to applicable federal, state and local rules for non-hazardous solid waste materials. No special precautions are necessary during repackaging. Waste is not classified as hazardous.

14. Transport information

Not classified as dangerous goods

14.1. UN Number or ID number

UN number:	Not applicable
IMDG/IMO	Not subject to classification
ADR/RID	Not subject to classification
ICAO/IATA	Not subject to classification

14.2. UN proper shipping name

Not relevant

14.3. Transport hazard class(es)

Not relevant

14.4. Packing group

Not relevant

14.5. Environmental hazards

Not relevant

14.6. Special precautions for user

Not relevant

14.7. Maritime transport in bulk according to IMO instruments

The product is not transported in bulk

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

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) with later 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 (CLP) with later amendments.

15.2. Chemical safety assessment

A chemical safety report (CSR) has been carried out for the substance in accordance with Regulation (EC) 1907/2006 (REACH).

16. Other information

According to Chapter 1.5.2 of the UN Globally Harmonized 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. Since this product does not meet these criteria, a SDS according to 453/2010/EC is not issued. In

order to communicate relevant HSE (health, safety and environmental) information, this product safety information (PSI) is provided instead.

In accordance with REACH article 31(5), safety data sheets shall be supplied in an official language of the Member State(s) where the substance or mixture is placed on the market. This obligation, however, only applies for hazard-classified products which require a formal SDS. Since this product is not hazard-classified, the product safety information (PSI) is, in accordance with current regulation, provided in English language only.

REACH article 31(7) requires relevant exposure scenarios from the Chemical Safety Report (CSR) to be annexed to the SDS. However, according to REACH Annex I, section 0. (Introduction), subsection 0.6. no 4 and 5, exposure scenarios are only required for hazard-classified substances or mixtures. Since this product is not hazard-classified according to CLP, there is no requirement for exposure scenarios.

Legal Disclaimer: The information given in this sheet is to the best of PCC BakkiSilicon knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

This PSI must be made available to all those who handle the product.

Abbreviations and acronyms used

EC: European Commission
DNEL: Derived no-effect level
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
EWC: European Waste Code (a code from the EU's common classification system for waste)
IATA: The International Air Transport Association
ICAO: The International Civil Aviation Organisation
IMDG: The International Maritime Dangerous Goods Code
IMO: International Maritime Organization
PBT: Persistent, Bioaccumulative and Toxic
RID: The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN: United Nations

Information added, deleted, or revised

vPvB: very Persistent and very Bioaccumulative

Version

Sections 1-16 have been revised.

Prepared by

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