

MATERIAL SAFETY DATA SHEET

MICROSILICA MS 93

1. PRODUCT AND COMPANY IDENTIFICATION

Identification	Microsilica / silica fume / fume de silice
Purpose	Additive in concrete applications
Company	Carbon Enterprises Ltd. 10 Orchard Way, Esher, Surrey, KT10 9DY, United Kingdom
Telephone	+44 1372 475 945
Fax	+44 1372 467 043
Email	ce@carbonenterprises.co.uk
REACH	Reg. No. 01-2119486866-17-0013 (fumes silica)

2. HAZARDS IDENTIFICATION

Substance classification	Product does not meet the criteria for hazard classification according to Dir. 67/548/EEC(DSD) and (EC)No.1272/2008 (CLP)
Hazards	If product is not stored as indicated, when dry large airborne concentrations above recommended limits may cause irritation to eyes, skin, mucous membranes and the respiratory system
Classification	Product classified in accordance with current EC lists, supplemented by specialized literature and reports
Labels	While it is not mandatory to label this product it should be handled according to safety recommendations
Other	The product is an inorganic material and it is not classifiable as a PBT/vPvB substance according to annex X111 of REACH

3. COMPOSITION / INGREDIENTS

Amorphous silica	CAS-No. 69012-64-2 EINECS No. 273-761-1	(90 – 100% by weight)
Magnesium oxide	CAS-No. 1309-48-4 EINECS No. 215-171-9	
Diiron trioxide	CAS-No. 1309-37-1 EINECS No. 215-168-2	
Cristobalite	CAS-No 14464-46-1 EINECS No. 238-455-4	(<0.5% by weight)

4. FIRST AID MEASURES

General	If in doubt seek medical advice.
Inhalation	Fresh air and rest. Seek medical attention if it continues.
Skin Contact	Remove contaminated clothing. Wash the skin immediately with soap and water. Seek medical if discomfort continues.
Eye contact	Remove contact lenses. Flush immediately with water seek medical attention if discomfort continues.
Ingestion	Immediately drink a couple of glasses or milk provided the victim is fully conscious. Do not induce vomiting. Seek medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing media	Use fire fighting media appropriate for surrounding materials
Fire and explosion hazards	The product is non combustible. High temperatures create crystalline SiO ₃ modifications. (Christobalite and/or Tridymite)
Protective equipment	Use fresh air equipment when the product is involved in fire. In case of evacuation and approved protection mask should be used. See also Sect. 8

6. ACCIDENTAL RELEASE MEASURES

Personal	Use protective equipment as in Sect. 8
Environmental	Do not allow product to enter sewer, water system or soil
Clean up	Use mechanical handling equipment. Collect in suitable containers and deliver as waste according to Sect. 13

7. HANDLING AND STORAGE

Handling	Avoid operations that liberate the remaining dust
Storage	No special storage precautions noted. Avoid leakage

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

Component name	Identification	Unit	Year
Diiron trioxide (Fe ₂ O ₃)	CAS-No 1309-37-1	8h:5 mg/m ³	2003
	EC No 215-168-2	Value 10 mg/m ³	
Magnesium oxide (as Mg) fume and respirable dust		8h:4 mg/m ³	
Magnesium oxide (as Mg), Total inhalable dust	CAS-No 1309-48-4	8h:10 mg/m ³	
	EC No 215-171-9		

8. (cont)

Silica amorphous respirable dust

8h:6mg/m³

Exposure controls

Recommended monitoring

Periodic health examinations on persons exposed to the dust should include pulmonary examination: Spirometry and X ray examinations

Other info on threshold limit values

The listed safety equipment is a suggestion. Risk assessment (actual risk) may lead to other requirements.

Occupational exposure controls

Provide adequate ventilation. No eating drinking or smoking while working with this material. Personal protection equipment should be chosen according to CEN standards

Respiratory protection

Use mask with filter P2/P3 in case of dust formation

Hand protection

Use gloves suitable for the work. Penetration time is not relevant as the product is solid

Eye protection

Use tight fitting goggles if dust is generated

Skin protection

No special precautions

Other info

Eye wash facilities should be available when handling this product

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

Ultrafine amorphous powder

Odour

None

Colour

Grey

Solubility in water

Ignorable

Solubility in fat

Ignorable

Specific gravity

Value: 2.3-2.4 g/cm³

Bulk density

Value: 250-650 kg/m³

Melting range

Value: 1550-1570 degrees C

Particle size

Value: 0.15-0.5 micron

Physical and chemical properties

Specific surface 16-30 m²/gm

10. STABILITY AND REACTIVITY

Materials to avoid

Hydrofluoric acid (HF)

Hazardous decomposition products

Fire or high temperatures create crystalline SiO₂ modifications (christobalite/tridymite)

Stability

Stable under normal temperature conditions and use

11. TOXICOLOGICAL INFORMATION

General

The product has low toxicity. Only large volumes may have an adverse impact on human health

Inhalation

Dust may irritate respiratory system or lungs

Skin contact

Dust may irritate the skin in a mechanical way. Prolonged contact may cause dryness of the skin

Eye contact

Dust may irritate eyes mechanically

Ingestion

The product causes irritation of mucous membranes and may

11. (cont)

Chronic effects	cause abdominal pains if swallowed
Sensitisation	No known chronic or acute health hazards
Carcinogenicity	Sensitizing properties are not known
Teratogenic properties	Carcinogenic properties are not known
Reproductive toxicity	Effects on foetus development are not known
Mutagenicity	Effects harmful to reproduction are not known
	Mutagenic properties are now known

12. ECOLOGICAL INFORMATION

Ecotoxicity	Not regarded as dangerous for the environment
Mobility	Insoluble in water. Sinks in water
Persistence and degradability	The product solely consists of inorganic compounds which are not biodegradable

13. DISPOSAL CONSIDERATIONS

Product classified as hazardous waste	No
Specify the appropriate methods of disposal	Dispose of in/on site landfill area or seek recommendations from the Local Authority

14. TRANSPORT INFORMATION

Other applicable info	Not considered as dangerous goods under UN, IMO, ADR/RID or IATA/ICAO
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15. REGULATORY INFORMATION

S phrases	Safety data sheet is available on request from professional users
References. Laws/regulations	CHIP Regulations
	Directive (EC) nr 1907/2006 (REACH) Annex II: Safety data sheets
	Occupational exposure limits. EH40/2005
	Regulation of hazardous waste
	Dangerous goods regulation
	The Safety Data Sheet is based on information provided by the producer

16. OTHER INFORMATION

None