

# Carbon Enterprises Ltd.

## MATERIAL SAFETY DATA SHEET

### MICROSILICA/SILICA FUME MS 93, MS 93UD MS 96, MS 96UD

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Identification	Microsilica / silica fume / fume de silice
Purpose	Additive in concrete and refractory applications
Company	Carbon Enterprises Ltd. 10 Orchard Way, Esher, Surrey, KT10 9DY, United Kingdom
Telephone	+44 1372 800 481
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#### 2. HAZARDS IDENTIFICATION

Hazard description	In normal use the product is not regarded as hazardous to health
Fire and explosion	The product is not classified as flammable
Environment	The product is not classified as harmful to the environment

#### 3. COMPOSITION / INGREDIENTS

REACH	Reg No. 01-2119486866-17-0003 (silica fume)
Fumes silica	CAS-No. 69012-64-2 EC No. 273-761-1
Magnesium oxide	CAS-No. 1309-48-4 EC No. 215-171-9
Diiron trioxide	CAS-No. 1309-37-1 EC No. 215-168-2
HH/HF/HE	T+ = Very toxic, T = Toxic, C = Corrosive, Xn = Harmful Xi = Irritating, E = Explosive, O = Oxidising, F+ = extremely flammable, F = Very flammable, N = Environmental Hazard
Component comments	Microsilica contains 1% crystalline silicon

#### 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.

#### 4. (cont)

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 <sub>3</sub> 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 handling which leads to dust formation. Avoid inhalation of dust and contact with skin and eyes.
Storage	No special storage precautions noted.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values	Identification	Unit	Year
Component name			
Diiron trioxide (Fe <sub>2</sub> O <sub>3</sub> )	CAS-No 1309-37-1 EC No 215-168-2	8h:5 mg/m <sup>3</sup> Value 10 mg/m <sup>3</sup>	2003
Magnesium oxide (as Mg) fume and respirable dust		8h:4 mg/m <sup>3</sup>	
Magnesium oxide (as Mg), Total inhalable dust	CAS-No 1309-48-4 EC No 215-171-9	8h:10 mg/m <sup>3</sup>	
Silica amorphous respirable dust		8h:2.4 mg/m <sup>3</sup>	2002
Silica amorphous respirable dust		8h:6mg/m <sup>3</sup>	
Exposure controls			
Recommended monitoring	Periodic health examinations on persons exposed to the dust should include pulmonary examination: Spirometry and X ray examinations		

## 8. (cont)

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/cm <sup>3</sup>
Bulk density	Value: 250-650 kg/m <sup>3</sup>
Melting range	Value: 1550-1570 degrees C
Particle size	Value: 0.15-0.5 micron
Physical and chemical properties	Specific surface 16-30 m <sup>2</sup> /gm

## 10. STABILITY AND REACTIVITY

Materials to avoid	Hydrofluoric acid (HF)
Hazardous decomposition products	Fire or high temperatures create crystalline SiO <sub>2</sub> 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 cause abdominal discomfort if swallowed
Chronic effects	No known chronic or acute health hazards
Sensitisation	Sensitizing properties are not known
Carcinogenicity	Carcinogenic properties are not known
Teratogenic properties	Effects on foetus development are not known
Reproductive toxicity	Effects harmful to reproduction are not known
Mutagenicity	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

## 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