

Product name: Fumed Silica

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name:

Fumed Silica

Chemical name:

Silicon dioxide, chemically prepared

Additional identification

Chemical name:

Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. 7631-86-9)

Chemical formula:

SiO₂

INDEX No.

-

CAS-No.

112945-52-5

EC No.

231-545-4

REACH Registration No.

01-2119379499-16-0000 (TPR)

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

Identified uses:

Sealant
Coloured printing inks
Paints and varnishes.
Adhesive
Silicone rubber
Cosmetic ingredient
Cosmetics
Agrochemicals
Antiblocking agents
Anticaking agent
Coating agent
Dispersant
Flow-promoting agent.
Reinforcing agent.
Carrier

Uses advised against:

None known.

1.3 Details of the supplier of the safety data sheet

Company Name : Easy Composites Ltd
Unit 39 Park Hall Business Village,
Longton, Stoke-on-Trent, ST3 5XA

Telephone 01782 454499

E-mail sales@easycomposites.co.uk

1.4 Emergency telephone number:

01782 454499 (office hours only)

SECTION 2: Hazards identification

Product name: Fumed Silica

2.1 Classification of the substance or mixture

The product has not been classified as hazardous according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Not classified

2.2 Label Elements

Not applicable

2.3 Other hazards

Not a PBT, vPvB substance as per the criteria of the REACH Regulation.

Results of PBT and vPvB assessment

Not a PBT, vPvB substance as per the criteria of the REACH Regulation.

SECTION 3: Composition/information on ingredients

Chemical name:

Silicon dioxide, chemically prepared

3.1 Substances

General information: No hazardous ingredients.

Chemical name

Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. 7631-86-9)

INDEX No.:

CAS-No.:

112945-52-5

EC No.:

231-545-4

REACH Registration No.:

01-2119379499-16-0000 (TPR)

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. 7631-86-9)		112945-52-5	231-545-4	01-2119379499-16	No data available.	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

This substance is listed as SVHC.

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation:

In case product dust is released: Possible discomfort: cough, sneezing
Move to fresh air.

Skin Contact:

Wash off with plenty of water and soap.

Eye contact:

Possible discomfort is due to foreign substance effect. Rinse thoroughly with plenty of water keeping eyelid open. In case of persistent discomfort: Consult an ophthalmologist.

Product name: Fumed Silica

Ingestion: Clean mouth with water and drink afterwards plenty of water. After absorbing large amounts of substance / In case of discomfort: Supply with medical care.

4.2 Most important symptoms and effects, both acute and delayed: None known.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: None known.

Treatment: No hazards which require special first aid measures.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray, foam, CO2, dry powder. Adapt fire-extinguishing measures to surroundings

Unsuitable extinguishing media: Do not use full-force water jet in order to avoid dispersal and spread of the fire.

5.2 Special hazards arising from the substance or mixture: None known.

5.3 Advice for firefighters

Special fire fighting procedures: Water used to extinguish fire should not enter drainage systems, soil or stretches of water. Ensure there are sufficient retaining facilities for water used to extinguish fire. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.

6.1.1 For non-emergency personnel: No data available.

6.1.2 For emergency responders: No data available.

6.2 Environmental Precautions: Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems.

6.3 Methods and material for containment and cleaning up: Sweep up or vacuum up spillage and collect in suitable container for disposal.

6.4 Reference to other sections: For personal protection see section 8. For disposal considerations see section 13.

SECTION 7: Handling and storage:

Product name: Fumed Silica

7.1 Precautions for safe handling: Handle in accordance with good industrial hygiene and safety practice. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used. If necessary: Local ventilation.

7.2 Conditions for safe storage, including any incompatibilities: Keep in a dry place. Take precautionary measures against static discharges.

7.3 Specific end use(s): Applications; see Section 1. No further information available

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. 7631-86-9) - Inhalable dust.	TWA	6 mg/m ³	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. 7631-86-9) - Respirable dust.	TWA	2.4 mg/m ³	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
Chemical name	Type	Exposure Limit Values	Source
Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. 7631-86-9) - Inhalable dust.	TWA	6 mg/m ³	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)
Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. 7631-86-9) - Respirable dust.	TWA	2.4 mg/m ³	UK. EH40 Workplace Exposure Limits (WELs), as amended (12 2011)

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

8.2 Exposure controls

Appropriate Engineering Controls: Ensure suitable suction/aeration at the work place and with operational machinery. Local ventilation if necessary. see also section 7.

Individual protection measures, such as personal protective equipment

Eye/face protection: Safety glasses with side shields If dust occurs: basket-shaped glasses

Hand Protection: Additional Information: Wear protective gloves made of the following materials: material, rubber, leather.
Additional Information: The material thickness and rupture time data do not apply to non-solute solids / dusts.

Skin and Body Protection: No special protective equipment required. Preventive skin protection

Respiratory Protection: No special protective equipment required. If dust occurs: Dust mask with P2 particle filter

Product name: Fumed Silica

Hygiene measures: When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. To ensure ideal skin protection: use super fatted soaps and skin cream for skin care. Wash contaminated clothing before reuse.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state: solid

Form: Powder

Color: White

Odor: odourless

Odor Threshold: Not applicable

Melting Point: Approximate 1,700 °C

Boiling Point: No data available.

Flammability: Not applicable

Upper/lower limit on flammability or explosive limits

Explosive limit - upper: Not applicable

Explosive limit - lower: Not applicable

Flash Point: Not applicable solid

Self Ignition Temperature: Not applicable

Decomposition Temperature: > 2,000 °C

pH: 3.7 - 4.5 (40 g/l, 20 °C) Suspension

Viscosity

Dynamic viscosity: Not applicable solid

Kinematic viscosity: Not applicable solid

Flow Time: Not applicable

Solubility(ies)

Solubility in Water: > 1 mg/l

Solubility (other): No data available.

Partition coefficient (n-octanol/water): Not applicable

Vapor pressure: Not applicable

Relative density: Not applicable

Density: Approximate 2.2 g/cm³ (20 °C)

Bulk density: Not applicable

Vapor density (air=1): Not applicable

Particle characteristics

Particle Size: Not applicable

Particle Size Distribution: Not applicable

Specific surface area: Not applicable

Surface charge/Zeta potential: Not applicable

Assessment: Not applicable

Shape: Not applicable

Crystallinity: Not applicable

Surface treatment: Not applicable

Product name: Fumed Silica

9.2 Other information

Explosive properties:	Not to be expected in view of the structure
Oxidizing properties:	Not to be expected in view of the structure
Minimum ignition temperature:	Not applicable
Evaporation Rate:	Not applicable
Minimum ignition energy:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity:	No dangerous reaction known under conditions of normal use.
10.2 Chemical Stability:	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions:	No hazardous reactions are known if properly handled and stored.
10.4 Conditions to avoid:	No dangerous reaction known under conditions of normal use.
10.5 Incompatible Materials:	None known.
10.6 Hazardous Decomposition Products:	None known. Stable under normal conditions. Product will not undergo hazardous polymerization.

SECTION 11: Toxicological information

General information: Silicosis or other product specific illnesses of the respiratory tract were not observed in association with the product.

Information on likely routes of exposure

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (list all possible routes of exposure)

Oral

Product: LD 50 (Rat): > 3,300 mg/kg Not toxic after single exposure; No deaths occurred.
LD 50 (Rat): > 5,000 mg/kg (OECD 401) comparable product, Based on available data, the classification criteria are not met.

Components:

Silicon dioxide, chemically prepared (CAS 112945-52-5 resp. 7631-86-9) LD 50 (Rat): > 5,000 mg/kg

Dermal

Product: LD 50 (Rabbit): > 5,000 mg/kg comparable product, Based on available data, the classification criteria are not met.

Components:

Product name: Fumed Silica

Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9) LD 50 (Rabbit): > 5,000 mg/kg

Inhalation

Product: LC 0 (Rat): 0.139 mg/l (maximum concentration attainable in experiments),
No deaths occurred., Based on available data, the classification criteria are
not met.
Not classified for acute toxicity based on available data.

Components:
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9) Not applicable, Vapour No data available., Dusts, mists and fumes

Repeated dose toxicity

Product: No data available.

Components:
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9) No data available.

Skin Corrosion/Irritation

Product: Not irritating analogous OECD method (Rabbit): Not irritating; Based on
available data, the classification criteria are not met.

Components:
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9) analogous OECD method (Rabbit): Not irritating

Serious Eye Damage/Eye Irritation

Product: Not irritating Rabbit: Not irritating Based on available data, the classification
criteria are not met.

Components:
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9) Not irritating analogous OECD method Rabbit:

Respiratory or Skin Sensitization

Product: Not known.

Components:
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9) No data available.

Carcinogenicity

Product: No evidence that cancer may be caused.

Components:
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9) No evidence that cancer may be caused.

Product name: Fumed Silica

Germ Cell Mutagenicity

In vitro

Product: No data available.

Components: No data available.
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

In vivo

Product: No data available.

Components: No data available.
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

Reproductive toxicity

Product: no evidence of reproductiontoxic properties

Components: no evidence of reproductiontoxic properties
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

Specific Target Organ Toxicity - Single Exposure

Product: no evidence for hazardous properties

Components: No data available.
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

Specific Target Organ Toxicity - Repeated Exposure

Product: no evidence for hazardous properties

Components: No data available.
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

Aspiration Hazard

Product: Not classified

Components: Not applicable
Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

11.2 Information on other hazards

Endocrine disrupting properties

Product: No data available.

Components:

Product name: Fumed Silica

Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

No data available.

Other hazards

Product: An Expert Judgment stated that no classification is necessary based on present knowledge.; No toxicological tests are available on the product.;

SECTION 12: Ecological information

12.1 Toxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC 50 ((Brachydanio rerio), 96 h): > 10,000 mg/l The reported toxic effects relate to the nominal concentration.

Components:

Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

LC 50 (Danio rerio, 96 h): > 10,000 mg/l The reported toxic effects relate to the nominal concentration.

Aquatic Invertebrates

Product: EC 50 (Daphnia magna, 24 h): > 1,000 mg/l The reported toxic effects relate to the nominal concentration.

Components:

Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

EC 50 (Daphnia magna, 24 h): > 1,000 mg/l The reported toxic effects relate to the nominal concentration. literature

Toxicity to Aquatic Plants

Product: No data available.

Components:

Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

No data available.

Toxicity to microorganisms

Product: No data available.

Components:

Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Components:

Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.)

No data available.

Product name: Fumed Silica

7631-86-9)

Aquatic Invertebrates

Product: No data available.

Components:
Silicon dioxide, No data available.
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

Toxicity to Aquatic Plants

Product: No data available.

Components:
Silicon dioxide, No data available.
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

Toxicity to microorganisms

Product: No data available.

Components:
Silicon dioxide, No data available.
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

12.2 Persistence and Degradability

Biodegradation

Product: The methods for determining biodegradability are not applicable to inorganic substances.

Components:
Silicon dioxide, The methods for determining biodegradability are not applicable to
chemically prepared inorganic substances.
(CAS 112945-52-5 resp.
7631-86-9)

BOD/COD Ratio

Product: No data available.

Components:
Silicon dioxide, No data available.
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

12.3 Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: Not to be expected.

Components:
Silicon dioxide, Not to be expected.
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9)

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: Not applicable

Components:

Product name: Fumed Silica

Silicon dioxide,
chemically prepared
(CAS 112945-52-5 resp.
7631-86-9) No data available.

12.4 Mobility in soil:

Product No remarkable mobility in soil is to be expected.
Components:
Silicon dioxide, chemically No remarkable mobility in soil is to be expected.
prepared (CAS 112945-52-5
resp. 7631-86-9)

12.5 Results of PBT and vPvB assessment:

Product Not a PBT, vPvB substance as per the criteria of the REACH Regulation.
Components:
Silicon dioxide, chemically Non-classified vPvB substance
prepared (CAS 112945-52-5 Non-classified PBT substance
resp. 7631-86-9)

12.6 Endocrine disrupting properties:

Product: No data available.
Components:
Silicon dioxide, chemically No data available.
prepared (CAS 112945-52-5
resp. 7631-86-9)

12.7 Other adverse effects:

Other hazards
Product: An Expert Judgment stated that no classification is necessary
based on present knowledge.
Additional Information: No ecotoxicological data is available for this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: No data available.
Disposal methods: No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer. Can be disposed of with domestic refuse in accordance with the necessary technical regulations following consultation with waste disposal expert(s) and the responsible authorities. The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority.
Contaminated Packaging: Offer rinsed packaging material to local recycling facilities. Other countries: observe the national regulations.

SECTION 14: Transport information

Product name: Fumed Silica

14.1 UN number or ID number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

EU Regulations

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances: none

EU. REACH Annex XIV, Substances Subject to Authorization: none

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: none

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): none

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use: none

Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens and mutagens at work.: none

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breast feeding.: none

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I:Not applicable

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: none

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work: none

15.2 Chemical safety assessment:

No exposure or risk assessment is required for this product since it is not classified for health or environmental risks.

International regulations

Product name: Fumed Silica

Montreal protocol

Not applicable

Stockholm convention

Not applicable

Rotterdam convention

Not applicable

Kyoto protocol

Not applicable

SECTION 16: Other information

Abbreviations and acronyms:

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; **ADN** - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; **AGW** - Occupational exposure limit; **ASTM** - American Society for Testing and Materials; **AwSV** - Ordinance on facilities for handling substances that are hazardous to water; **BSB** - Biochemical oxygen demand; **c.c.** - closed cup; **CAS** - Chemical Abstract Services; **CESIO** - European Committee of Organic Surfactants and their Intermediates; **CSB** - Chemical oxygen demand; **DMEL** - Derived minimum effect level; **DNEL** - Derived no effect level; **EbC50** - median concentration in terms of reduction of growth; **EC** - Effective concentration; **EINECS** - European Inventory of Existing Commercial Chemical Substances; **EN** - European norm; **ErC50** - median concentration in terms of reduction of growth rate; **GGVSEB** - German ordinance for road, rail and inland waterway transportation of dangerous goods; **GGVSee** - German ordinance for sea transportation of dangerous goods; **GLP** - Good Laboratory Practice; **GMO** - Genetic Modified Organism; **IATA** - International Air Transport Association; **ICAO** - International Civil Aviation Organization; **IMDG** - International Maritime Dangerous Goods; **ISO** - International Organization For Standardization; **LD/LC** - lethal dosis/concentration; **LOAEL** - Lowest observed adverse effect level; **LOEL** - Lowest observed effect level; **M-Factor** - multiplying factor; **NOAEL** - No observed adverse effect level; **NOEC** - no observed effect concentration; **NOEL** - no observed effect level; **o.c.** - open cup; **OECD** - Organisation for Economic Cooperation and Development; **OEL** - Occupational Exposure Limit; **PBT** - Persistent, bioaccumulative, toxic; **PNEC** - Predicted no effect concentration; **REACH** - REACH registration; **RID** - Convention concerning International Carriage by Rail; **SVHC** - Substances of Very High Concern; **TA** - Technical Instructions; **TRGS** - Technical Rules for Hazardous Substances; **vPvB** - very persistent, very bioaccumulative; **WGK** - Water Hazard Class

Key literature references and sources for data: No data available.

Wording of the H-statements in section 2 and 3: none
: none

Training information: No data available.

Revision Information Changes since the last version are highlighted in the margin. This version replaces all previous versions.

Product name: Fumed Silica

Disclaimer:

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.