

Trade name: SYLOBLOC® 45

Reviewed on: 01 Feb 2007
Replaces issue of: 16 Aug. 2005

Printing Date: 05-Feb-07
Revision: 8

1. Identification of the substance/ preparation and of the company :

Product Details

Trade Name : **SYLOBLOC® 45**

Application of the substance / the application:

Intermediate product of varied applicability in industry and trade. Detailed description can be obtained from the product information sheet

Manufacturer / Supplier:

W. R. Grace Specialty Chemicals (M) Sdn Bhd
Lot 114 , Gebeng Industrial Estate, Balok
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Pahang Darul Makmur (Malaysia)

Telephone: Malaysia + (609) 583 6646

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2. Composition/ information on ingredients :

Substance / Preparation:

Components (CAS No. and EINECS No.):

Amorphous silicon dioxide, chemically prepared (CAS No. 7631-86-9; EINECS No. 231-545-4)
Citric Acid (CAS No. 77-92-9; EINECS No. 201-069-1)

Chemical characterization

Description: Preparation of synthetic, amorphous silicon dioxide.

Dangerous components: Void

3. Hazards identification:

Hazard Specific hazards for humans and environment :

Hazard description: Not applicable

Information concerning particular hazards for human and environment: Not applicable

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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The product is very adsorbent and may have a drying effect on skin and eyes. When exceeding the OEL (Occupational Exposure Limit) a mechanical overburdening of the respiratory system is possible. Air turbulences of product dust particles will cause an explosive atmosphere. The product is combustible.

4. First-aid measures :

General information	:	Take care of the following instructions.
After inhalation	:	Supply fresh air.
After skin contact	:	Immediately rinse with water
After eye contact	:	Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing	:	If symptoms occur consult doctor.

5. Fire- fighting measures :

Suitable extinguishing agent : Foam, CO2, sand, extinguishing powder

Protective equipment : Wear protective equipment

For safety reason unsuitable extinguishing agents: Water

Additional information:

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6. Accidental release measures :

Person-related safety precautions	:	Wear protective clothing, avoid formation of dust, keep away from ignition sources.
Measures for environmental protection	:	Do not allow to enter sewers/surface or ground water.
Methods for cleaning/collecting	:	Sweep the spill area; avoid raising dust
Additional Information	:	No dangerous substances are released

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Information for safe handling : Prevent formation of dust, extractor required at the object, keep receptacles tightly sealed, use appropriate industrial vacuum cleaners or central vacuum systems for dust removal, prevent static electric sparks.

Information about protection against fire and explosion : The product is not flammable. Earth container to avoid electric sparks, especially in contact with flammable substances.

Storage:

Requirements to be met by storerooms and receptacles : No special requirements.

Information about storage in one common storage facility : Store away from foodstuffs.

Further information about storage conditions : Keep container tightly sealed, protect from heat and direct sunlight, store in dry conditions.

Storage class : 13

8. Exposure controls/ personal protection :

Additional information about design of technical facilities: No further data.

Ingredients with limit values that require monitoring at the workplace:**7631-86-9 amorphous silicon dioxide, chemically prepared**

TWA RESPIRABLE DUST (GB)	Short –term value: --mg/m ³ Long-term value: 2.4 A mg/m ³ EH40/2001; OEL summary: EH44
TWA TOTAL INHALABLE DUST (GB)	Short –term value: --mg/m ³ Long-term value: 6 E mg/m ³ EH40/2001; OEL summary: EH44
MAK (TRGS 900) (Germany)	Long-term value: 4 E mg/m ³ 16; Y; DFG; vergleiche Abschnitt V

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IDLH	Short-term value: 3000 mg/m ³
PEL	NIOSH 80 / (%SiO ₂) mg/ m ³
REL	OSHA TWA for amorphous silica 6 mg/m ³
TLV	NIOSH TWA 10* mg/ m ³ / 5** mg/ m ³ ACGIH TWA - * Total Dust, ** Respirable fraction

Personal protective equipment:**General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:

If the OES value is exceeded.
Filter P2

Protection of hands :

Protection gloves

Wear gloves for the protection against mechanical hazards according to EN 388. Use gloves of stable material (e.g. Nitrile) – if necessary tricoted to improve the wearability. Preventive skin protection by use of skin-protecting agents is recommended. After use of gloves apply skin-cleaning agents and skins cosmetics.

Material of gloves

EN 388: Minimum requirements for efficiency level 1 for all groups.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material:

EN 420: Minimum requirements for efficiency level 1 for all groups.

Eye protection:

Safety glasses.

Body protection: Protective work clothing

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9. Physical and chemical properties :**General information**

Form : Powder
Colour : White
Odour : Odourless

Change in condition:

Melting point/melting range: : 1610°C
Boiling point/boiling range: : 2230°C

Flash point : Not applicable

Flammability (Solid, gaseous) : Product is not flammable

Self-igniting: : Product is not self-igniting

Danger or explosion : Product does not present an explosion hazard.

Density at 20°C : ~2.17 – 2.20 g/cm³

Bulk density at 20°C : 200 – 600 kg/m³

Solubility in / miscibility with water : Partly soluble

pH-value at 20°C : 2.9 – 5.0

Solids content : 100.0%

10. Stability and reactivity :**Thermal decomposition/conditions to be avoided:**

No decomposition if used according to specifications.

Dangerous reactions: Reacts with Hydrogen fluoride

Dangerous decomposition products: No dangerous decomposition products known.

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Oral	LD50	10000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50	OECD 402 >0.139 mg/1/14h (rat)

Primary irritant effect**On the skin:** No irritant effect**On the eye:** Irritating effect**Sensitization:** No sensitizing effects known**Subacute to chronic toxicity**

Amorphous silicon dioxide, chemically prepared:

No negative effects were determined during tests for chronic oral toxicity, carcinogenicity, teratogenicity and fertility. No irreversible changes and no symptoms of silicosis were determined during tests for chronic inhalative toxicity.

Additional toxicological information

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12. Ecological information :**Information about elimination (persistence and degradability):****Other information:** The product is chemically and biologically inert. By the insolubility in water there is a separation at every filtration and sedimentation process.**Ecotoxicological effects:****Aquatic toxicity****Fish toxicity:****7631-86-9 amorphous silicon dioxide, chemically prepared**

LC50 (96h)	>10000 mg/l (Brachydanio rerio)
	OECD 202

77-92-9 citric Acid

LC 100	894 mg/l (Carassius auratus)
LC 50	440 mg/l (Leuciscus idus)

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Water flea toxicity:	
7631-86-9 amorphous silicon dioxide, chemically prepared	
EC50 (24 h)	>1000 mg/l (Daphnia magna) OECD 202
77-92-9 citric Acid	
EC50	85 mg/l (Daphnia magna)
Algae toxicity:	
77-92-9 citric Acid	
EC5	80 mg/l (Microcystis aeruginosa) 640 mg/l (Scenedesmus quadricauda)
Bacterial toxicity:	
77-92-9 citric Acid	
EC5	>10000 mg/l (Pseudomonas putida)
General notes: Generally not hazardous for water	

13. Disposal considerations :**Product:****Recommendation:** Disposal must be made according to official regulations.**Waste disposal key:** The disposal of the product has to be carried out in accordance with the legal requirements. EWC waste codes are strictly industry-oriented therefore waste classification has to be done by the waste producer.**Uncleaned packaging:** Disposal must be made according to official regulations.**14. Transport information :****Transport /Additional information:**

Not regulated as hazardous goods by DOT, ADR, IMO, or IATA

15. Regulatory information :**Registered in the international inventory lists:**EINECS (Europe)
TSCA (USA)
DSL (Canada)
AICS (Australia)
MITI (Japan)
MOE (Korea)
PICCS (Philippines)

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This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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