



Printing date 02/03/2011

Version: 2.1

Reviewed on 02/03/2011

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

• **Product identifier**

• **Trade name:** **SYLOID® 244**

• **Application of the substance / the preparation:**

Intermediate product of varied applicability in industry and trade.

• **Details of the supplier of the safety data sheet**

• **Manufacturer/Supplier:**

GRACE Davison  
W. R. Grace & Co.-Conn  
7500 Grace Drive  
Columbia MD 21044  
U. S. A.

**MSDS Sheet Supplied by:**



• **Information department:**

Health and Safety (9 AM to 5 PM-EST) 1-410-531-4000  
MSDS.Davison@grace.com

• **Emergency telephone number:**

Transportation Emergency (24 hr)  
Other Emergencies (24 hr)

Chemtrec 1-800-424-9300  
1-410-531-4000

## 2 Composition/information on ingredients

• **Chemical characterization:** Substances Substance.

• **Chemical characterization:** Mixtures

• **Description:**

• **CAS No. and description:**

7631-86-9 amorphous silicon dioxide, chemically prepared

• **CAS No. & List of Dangerous Components** None

## 3 Hazards identification

• **Classification of the substance or mixture**

• **Classification system:**

The classification was made according to the latest editions of international substances lists.

• **Classification system:**

• **NFPA ratings (scale 0 - 4)**



Health = 1  
Fire = 0  
Reactivity = 0

• **HMIS-ratings (scale 0 - 4)**



Health = 1  
Fire = 0  
Reactivity = 0

• **Other hazards**

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.

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**4 First aid measures**· **Description of first aid measures**· **After inhalation:** Supply fresh air; consult doctor in case of complaints.· **After skin contact:**

Generally the product does not irritate the skin.

Wash with water.

· **After eye contact:**

Flush opened eye with large quantities of running water for at least 15 minutes. If symptoms persist, consult a doctor.

· **After swallowing:** Seek medical attention. Do not induce vomiting.· **Information for doctor:**· **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**5 Firefighting measures**· **Extinguishing media**· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.· **Special hazards arising from the substance or mixture**

No further relevant information available.

· **Advice for firefighters**· **Protective equipment:** Wear personal protective equipment.· **Additional information**

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

**6 Accidental release measures**· **Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

The product is combustible.

· **Environmental precautions:** Damp down dust with water spray.· **Methods and material for containment and cleaning up:**

Vacuuming or wet sweeping may be used to avoid dust dispersal.

· **Reference to other sections** No dangerous substances are released.**7 Handling and storage**· **Handling:**· **Precautions for safe handling**

Prevent formation of dust.

Keep receptacles tightly sealed.

Provide suction extractors if dust is formed.

Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.

Take precautionary measures against static discharge.

· **Information about protection against explosions and fires:**

Protect against electrostatic charges.

The product is not flammable.

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- **Conditions for safe storage, including any incompatibilities**
- **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 receptacle tightly sealed.  
Store in dry conditions.  
This product is hygroscopic.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

### 7631-86-9 amorphous silicon dioxide, chemically prepared

IDLH	Short-term value: 3000 mg/m <sup>3</sup> IDLH: Immediately Dangerous to Life or Health
PEL	80/%SiO <sub>2</sub> mg/m <sup>3</sup> OSHA TWA for amorphous silica
REL	6 mg/m <sup>3</sup> NIOSH TWA
TLV	10* 5** mg/m <sup>3</sup> ACGIH TWA *Total dust **Respirable fraction

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

- **Breathing equipment:**

Required if the Occupational Exposure Limit (OEL) value is exceeded. As appropriate for the employee exposure, use a NIOSH approved respirator and cartridge.

- **Protection of hands:**

Wear gloves for the protection against mechanical hazards.  
Use gloves of stable material (e.g. Nitrile)



Protective gloves

Check protective gloves prior to each use for their proper condition.

Check the permeability prior to each new use of the glove.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves**

Butyl rubber, BR

Nitrile rubber, NBR

Recommended thickness of the material:  $\geq 0.11$  mm

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

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· For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR  
Nitrile rubber, NBR

· Not suitable are gloves made of the following materials: Strong fabric gloves

· Eye protection:



Safety glasses

· Body protection: Protective work clothing

## 9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Powder
Color:	White

· Odor:	Odorless
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· pH-value at 20°C (68 °F):	4.0-9.0
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· Change in condition

Melting point/Melting range:	> 1700°C (> 3092 °F)
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Boiling point/Boiling range:	> 1700°C (> 3092 °F)
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· Flash point:	Not applicable.
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· Flammability (solid, gaseous):	Product is not flammable.
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· Ignition temperature:	Not applicable.
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· Decomposition temperature:	Not determined.
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· Auto igniting:	Product is not self-igniting.
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· Danger of explosion:	Product does not present an explosion hazard.
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· Vapor pressure at 20°C (68 °F):	- hPa
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· Density at 20°C (68 °F):	2.17 - 2.20 g/cm³ (18.109 - 18.359 lbs/gal)
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· Bulk density at 20°C (68 °F):	70 - 600 kg/m³
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· Vapour density	Not applicable.
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· Evaporation rate	Not applicable.
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· Solubility in / Miscibility with Water:	Insoluble.
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· Segregation coefficient (n-octanol/water):	Not determined.
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· Viscosity:	
Dynamic at 20°C (68 °F):	- mPas

## 10 Stability and reactivity

· Reactivity

· Chemical stability No decomposition if used according to specifications.

· Possibility of hazardous reactions No dangerous reactions known.

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- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### · Information on toxicological effects

#### · Acute toxicity:

#### · LD/LC50 values that are relevant for classification:

##### 7631-86-9 amorphous silicon dioxide, chemically prepared

Oral	LD50	>5110 mg/kg (rat) OECD TG 401
Dermal	LD50	> 5000 mg/kg (rabbit)
Inhalative	LC0	>140->2000 mg/m³/4h (rat) Maximum attainable concentration, mortality does not appear. OCED TG 403

#### · Primary irritant effect:

##### · on the skin:

May cause irritation with dryness and abrasion.

##### 7631-86-9 amorphous silicon dioxide, chemically prepared

Irritation of skin	IS	0 (rabbit) OECD TG 404
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##### · on the eye:

No irritating effect.

##### 7631-86-9 amorphous silicon dioxide, chemically prepared

Irritation of eyes	IS	0 (rabbit) OECD TG 405
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#### · Sensitization: No sensitizing effects known.

#### · Other information (about experimental toxicology):

##### 7631-86-9 amorphous silicon dioxide, chemically prepared

Oral	NOAEL	≥1340 mg/kg/day (rat) OECD 414 maternal and development toxicity
	AMES Test	>5 mg/plate (in-vitro) negative with and without metabolic activation OECD TG 471

#### · 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.

##### 7631-86-9 amorphous silicon dioxide, chemically prepared

Oral	NOAEL (90 d)	9000 mg/kg (rat) OECD TG 408
Inhalative	NOAEC (90 d)	1 mg/m³ (rat)

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**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

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

**12 Ecological information**· **Toxicity**· **Acquatic toxicity:**· **Fish toxicity****7631-86-9 amorphous silicon dioxide, chemically prepared**

LC0 (96 h) (static)	10000 mg/l (Brachydanio rerio)
OECD TG 203	

· **Water flea toxicity****7631-86-9 amorphous silicon dioxide, chemically prepared**

EC50 (24 h)	> 1000 mg/l (Daphnia magna)
OECD TG 202	

· **Algae toxicity****7631-86-9 amorphous silicon dioxide, chemically prepared**

EC50 (72 h)	> 10000 mg/l (Scenedesmus subspicatus)
comparable substance	
OECD TG 201	

· **Persistence and degradability**· **Other information:**

Amorphous silica dioxide is chemically and biologically inert.

By the insolubility in water there is a separation at every filtration and sedimentation process.

· **Behavior in environmental systems:**· **Bioaccumulative potential** Does not accumulate in organisms· **Mobility in soil** No further relevant information available.· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.**13 Disposal considerations**· **Waste treatment methods**· **Recommendation:**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**14 Transport information**· **DOT regulations:**· **Hazard class:** -

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- Land transport ADR/RID (cross-border):
- ADR/RID class: -
- Maritime transport IMDG:
- IMDG Class: -
- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class: -
- Transport/Additional Information:  
Not dangerous according to the above specifications.  
GRACE recommendation for air transport: Cargo aircraft only.

**15 Regulatory information**

## · SARA

## · SARA 302/304

None of the ingredients is listed.

## · SARA 313

None of the ingredients is listed.

## · TSCA (Toxic Substances Control Act):

All ingredients are listed.

## · Proposition 65

## · Chemicals known to cause cancer:

None of the ingredients is listed.

## · Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

## · Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

## · Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

## · Carcinogenic categories

## · EPA (Environmental Protection Agency)

None of the ingredients is listed.

## · IARC (International Agency for Research on Cancer)

None of the ingredients are listed.

## · NTP (National Toxicology Program)

None of the ingredients is listed.

## · TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

## · NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

## · OSHA-Ca (Occupational Safety &amp; Health Administration)

None of the ingredients is listed.

## · Canadian DSL

All ingredients are listed.

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<ul style="list-style-type: none"> <li>• <b>Canadian NDSL</b></li> </ul>
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None of the ingredients is listed.
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<ul style="list-style-type: none"> <li>• <b>European EINECS</b></li> </ul>
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All ingredients are listed.
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<ul style="list-style-type: none"> <li>• <b>Philippines Inventory of Chemicals and Chemical Substances PICCS</b></li> </ul>
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All ingredients are listed.
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<ul style="list-style-type: none"> <li>• <b>Inventory of the Existing Chemical Substances manufactured or imported in China IECSC</b></li> </ul>
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All ingredients are listed.
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<ul style="list-style-type: none"> <li>• <b>Australian Inventory of Chemical Substances AICS</b></li> </ul>
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All ingredients are listed.
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<ul style="list-style-type: none"> <li>• <b>Existing and New Chemical Substance List ENCS</b></li> </ul>
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<ul style="list-style-type: none"> <li>• <b>Korean Existing Chemical Inventory KECI</b></li> </ul>
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7631-86-9 amorphous silicon dioxide, chemically prepared	KE-31032
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<ul style="list-style-type: none"> <li>• <b>New Zealand Inventory (ERMA) All ingredients are listed.</b></li> </ul>
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<ul style="list-style-type: none"> <li>• <b>Product related hazard Informations:</b></li> </ul>
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<ul style="list-style-type: none"> <li>• <b>Safety phrases:</b></li> </ul>
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Do not empty into drains.
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## 16 Other information

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.

<ul style="list-style-type: none"> <li>• <b>Department issuing MSDS: GRACE Davison Safety &amp; Health Department</b></li> </ul>
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<ul style="list-style-type: none"> <li>• <b>Tarif number 28112200</b></li> </ul>
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<ul style="list-style-type: none"> <li>• <b>Contact:</b></li> </ul>
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