

1 Identification

- **Product identifier**
- **Trade name: SYLOID® 308**
- **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
W. R. Grace & Co.-Conn
7500 Grace Drive
Columbia MD 21044
U. S. A.
- **Information department:**
Health and Safety (9 AM to 5 PM-EST) 1-410-531-4000
MSDS.Davison@grace.com
- **Emergency telephone number:**
Chemtrec North America: +1-800-424-9300
Chemtrec International: +1-703-527-3887
Other Emergencies (24hr): +1-410-531-4000

2 Hazard(s) identification

- **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** None
- **Hazard pictograms** None
- **Signal word** None
- **Hazard statements** None
- **Additional information:**
See Section 11 and Section 12 for additional information. Risk depends on duration and level of exposure. Product is not classified based on test results.
- **Hazard not otherwise classified**
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.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Synthetic, amorphous silicon dioxide, fluorinated.

· CAS No. and description:		
7631-86-9	amorphous silicon dioxide, chemically prepared	91-97%

· List of Dangerous Components		
16949-65-8	magnesium hexafluorosilicate	3-9%
Acute Tox. 3, H301; Eye Dam. 1, H318; Acute Tox. 4, H332		

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove contaminated clothing if necessary to prevent direct skin contact.
- **After inhalation:** Supply fresh air or oxygen; call for doctor.

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- **After skin contact:**
Immediately flush skin with water for at least 15 minutes.
If skin irritation occur, consult a doctor.
- **After eye contact:**
Flush opened eye with large quantities of running water for at least 30 minutes. If symptoms occur, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Hazardous combustion products**
In certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
Hydrogen fluoride (HF)
- **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.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
- **Environmental precautions:** Do not allow to enter into sewers, surface water and/or groundwater.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to section 13.
Vacuuming or wet sweeping may be used to avoid dust dispersal.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

PAC-1:

7631-86-9 amorphous silicon dioxide, chemically prepared

18 mg/m³**PAC-2:**

7631-86-9 amorphous silicon dioxide, chemically prepared

740 mg/m³**PAC-3:**

7631-86-9 amorphous silicon dioxide, chemically prepared

4,500 mg/m³

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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 discharges.
- **Information about protection against explosions and fires:**
When transferring this material into flammable solvents, use proper grounding to avoid static electric sparks.
- **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:	
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7631-86-9 amorphous silicon dioxide, chemically prepared	
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IDLH	Short-term value: 3000 mg/m ³ IDLH: Immediately Dangerous to Life or Health
PEL	Long-term value: 80mg/m ³ /%SiO ₂ mg/m ³ OSHA TWA for amorphous silica
REL	Long-term value: 6 mg/m ³ NIOSH TWA
TLV	Long-term value: 10* 5** mg/m ³ OSHA TWA *Total dust **Respirable fraction

16949-65-8 magnesium hexafluorosilicate	
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PEL	Long-term value: 2.5 mg/m ³ OSHA TWA as F
REL	Long-term value: 2.5 mg/m ³ NIOSH TWA as F
TLV	Long-term value: 2.5 mg/m ³ ACGIH TWA as F

DNELs	
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7631-86-9 amorphous silicon dioxide, chemically prepared	
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Inhalative	DNEL(acute-local)	4 mg/m ³ (Worker) with reference to the German OEL of 4 mg/m ³ for synthetic amorphous silica
	DNEL(long-local)	4 mg/m ³ (Worker) with reference to the German OEL of 4 mg/m ³ for synthetic amorphous silica

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Additional Occupational Exposure Limit Values for possible hazards during processing:**Dust inhalable**PEL Long-term value: 15 mg/m³
TWAREL Long-term value: 15 mg/m³
TWA**Dust respirable**PEL Long-term value: 5 mg/m³
TWAREL Long-term value: 5 mg/m³
TWA**Additional information:** Valid lists at time of creation were used as basis.**Exposure controls****Personal protective equipment:****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

The usual precautionary measures for handling chemicals should be followed.

Do not eat, drink, smoke or sniff while working.

Protection of hands:

Protective gloves

Wear gloves for the protection against mechanical hazards.

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

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

Leather gloves

Use gloves of stable material

Material of gloves

Butyl rubber, BR

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm**For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

Butyl rubber, BR

Nitrile rubber, NBR

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

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9 Physical and chemical properties· **Information on basic physical and chemical properties**· **General Information**· **Appearance:****Form:** Powder**Color:** White· **Odor:** Odorless· **Odor threshold:** Not applicable.· **pH-value at 20 °C (68 °F):** 3-5· **Change in condition****Melting point/Melting range:** > 1700 °C (> 3092 °F)
(amorphous silicon dioxide, chemically prepared)**Boiling point/Boiling range:** > 1700 °C (> 3092 °F)
(amorphous silicon dioxide, chemically prepared)· **Flash point:** Not determined.· **Flammability (solid, gaseous):** Product is not flammable.· **Ignition temperature:** Not applicable.· **Decomposition temperature:** Not applicable.· **Auto ignition temperature:** Product is not self-igniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Explosion limits:****Lower:** Not applicable.**Upper:** Not applicable.· **Vapor pressure:** Not applicable.· **Density at 20 °C (68 °F):** ~1.9 g/cm³ (~15.8555 lbs/gal)· **Bulk density at 20 °C (68 °F):** 200 - 400 kg/m³· **Vapor density** Not applicable.· **Evaporation rate** Not applicable.· **Solubility in / Miscibility with****Water:** Slightly soluble.· **Coefficient of water/oil distribution:** Not available.· **Viscosity:****Dynamic:** Not applicable.**Kinematic:** Not applicable.· **Other information** No further relevant information available.**10 Stability and reactivity**· **Reactivity** No further relevant information available.· **Chemical stability** No decomposition if used and stored according to specifications.· **Possibility of hazardous reactions** Reacts with strong acids.· **Conditions to avoid** No further relevant information available.· **Incompatible materials:** Reacts with strong acids.· **Hazardous decomposition products:** Hydrogen fluoride (HF)

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11 Toxicological information· **Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:**

Oral	LD50	7376 mg/kg (rat) (OECD TG 401) Tested on a comparable substance of GRACE (SYLOID® 378)
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7631-86-9 amorphous silicon dioxide, chemically prepared

Oral	LD50	>5000 mg/kg (rat) (OECD 401)
Dermal	LD50	>5000 mg/kg (rabbit) (no guidance available)
Inhalative	LC0	>140->2000 mg/m³/4h (rat) (OCED 403) Maximum attainable concentration, mortality does not appear.

16949-65-8 magnesium hexafluorosilicate

Oral	LD50	125 mg/kg (rat) (other) Comparable substance (Sodium Hexafluorosilicate) Sodium Hexafluorosilicate and Fluorosilicic Acid, Review of Toxicological Literature, Oct. 2001, p. 11, table 1, HSDB (2000 b)
Dermal	LD50	>2000 mg/kg (rat) IUCLID 2000
Inhalative	LC50 (4h)	3.6 mg/l (rat) IUCLID 2000

· **Primary irritant effect:**· **on the skin:**

Irritation of skin	IS	0 (rabbit) (OECD TG 404) Tested on a comparable substance of GRACE (SYLOID® 378)
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7631-86-9 amorphous silicon dioxide, chemically prepared

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

Irritation of eyes	IS	0.5 (rabbit) (OECD TG 405) Conjunctivae redness Tested on a comparable substance of GRACE (SYLOID® 378)
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7631-86-9 amorphous silicon dioxide, chemically prepared

Irritation of eyes	IS	0 (rabbit) (OECD 405)
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16949-65-8 magnesium hexafluorosilicate

Irritation of eyes	IS	(Bovine Corneal Opacity and Permeability) (OECD 437) ECHA 2015
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· **Sensitization:** No sensitizing effects known.· **Respiratory sensitization** No further relevant information available.· **Skin sensitization**

No further relevant information available.

Sensitization possible through skin contact.

· **Additional toxicological information:**· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

7631-86-9	amorphous silicon dioxide, chemically prepared	3
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· **NTP (National Toxicology Program)**

None of the ingredients is listed.		
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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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

Oral NOAEL (90 d) 9000 mg/kg bw/day (rat) (OECD 408)

Inhalative NOAEL (90d) 31 mg/m³ (rat) (acc. to OECD 413)

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**· **Carcinogenicity****7631-86-9 amorphous silicon dioxide, chemically prepared**

Oral NOAEL (carcinogenicity) 3950-5530 mg/kg bw (mouse)

Literature

1830 mg/kg bw (rat)

Literature

· **Mutagenicity****7631-86-9 amorphous silicon dioxide, chemically prepared**AMES Test >5 mg/plate (in-vitro) (OECD 471)
negative, with and without metabolic activation
ECHA 2012· **Reproductive toxicity****7631-86-9 amorphous silicon dioxide, chemically prepared**

Oral NOAEL (maternal toxicity) 1350 mg/kg bw/day (rat) (OECD 414)

NOAEL (teratogenicity) 1350 mg/kg bw/day (rat) (OECD 414)

· **Specific target organ toxicity (single exposure)** No further relevant information available.· **Specific target organ toxicity (repeated exposure)** No further relevant information available.**12 Ecological information**· **Toxicity**· **Aquatic toxicity:**· **Fish toxicity****7631-86-9 amorphous silicon dioxide, chemically prepared**

LC0 (96 h) (static) 10000 mg/l (zebra fish) (OECD 203)

16949-65-8 magnesium hexafluorosilicate

LC50 (96 h) 65 mg/l (Lepomis macrochirus)

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

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

16949-65-8 magnesium hexafluorosilicate

EC50 (48 h) >100 mg/l (Daphnia magna) (OECD 202)

GRACE

comparable substance

· **Algae toxicity****7631-86-9 amorphous silicon dioxide, chemically prepared**EC50 (72 h) >10000 mg/l (Scenedesmus subspicatus) (OECD 201)
comparable substance**16949-65-8 magnesium hexafluorosilicate**

EC50 (72 h) >100 mg/l (Pseudokirchneriella subcapitata) (OECD 201)

GRACE

comparable substance

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- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Precautions for disposal:**
- **Recommendation:**
Disposal must be made according to official regulations.
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/provincial and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state/provincial and local requirements.

14 Transport information

- | | |
|--|--|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Not applicable. |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Not applicable. |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Not applicable. |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Not applicable. |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Segregation groups | - |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications.
GRACE recommendation for air transport: Cargo aircraft only. |

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15 Regulatory information

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

· SARA

· SARA 302/304

None of the ingredients is listed.

· SARA 313

None of the ingredients is listed.

· SARA 311/312 Not applicable.

· TSCA (Toxic Substances Control Act):

7631-86-9	amorphous silicon dioxide, chemically prepared	ACTIVE
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16949-65-8	magnesium hexafluorosilicate	ACTIVE
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· Hazardous Air Pollutants

None of the ingredients is 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.

· TLV (Threshold Limit Value)

None of the ingredients is listed.

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

None of the ingredients is listed.

· Canadian DSL

7631-86-9	amorphous silicon dioxide, chemically prepared
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16949-65-8	magnesium hexafluorosilicate
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· Canadian NDSL

None of the ingredients is listed.

· European EINECS

All ingredients are listed or exempted from listing.

· Philippines Inventory of Chemicals and Chemical Substances PICCS

All ingredients are listed or exempted from listing.

· Inventory of the Existing Chemical Substances manufactured or imported in China IECSC

7631-86-9	amorphous silicon dioxide, chemically prepared
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16949-65-8	magnesium hexafluorosilicate
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· Australian Inventory of Chemical Substances AICS

All ingredients are listed or exempted from listing.

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· **Existing and New Chemical Substance List ENCS**

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16949-65-8	magnesium hexafluorosilicate	1-329

· **Korean Existing Chemical Inventory KECI**

7631-86-9	amorphous silicon dioxide, chemically prepared	KE-31032
16949-65-8	magnesium hexafluorosilicate	KE-22747

· **TCSCA (Taiwan)**

7631-86-9	amorphous silicon dioxide, chemically prepared	EPEP4A01648271
16949-65-8	magnesium hexafluorosilicate	EPEP4A01714138

· **Russian Register of Potentially Hazardous Chemical and Biological Substances (RPOHV)**

7631-86-9	amorphous silicon dioxide, chemically prepared	№ AT-000209 от 18.01.1995 г.
16949-65-8	magnesium hexafluorosilicate	№ AT-008528 от 01.04.2014 г.

· **New Zealand Inventory of Chemicals (NZIoC)**

All ingredients are listed or exempted from listing.

· **Existing Chemical Directory of Thailand (DIW)**

All ingredients are listed or exempted from listing.

· **TCSI - Taiwan Chemical Substance Inventory**

All ingredients are listed or exempted from listing.

· **GHS label elements** None· **Hazard pictograms** None· **Signal word** None· **Hazard statements** None· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 1
Fire = 0
Reactivity = 0

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.

· **Relevant phrases**

H301 Toxic if swallowed.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

· **Department issuing SDS:** GRACE Safety & Health Department· **Harmonized Tariff Schedule** 3824 9996· **Contact:**

SALES OFFICES

USA:

GRACE

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• **Other information:**

• **Date of preparation / last revision** 07/13/2021 / 20.6

• **The first date of preparation** 02/18/2015

• **Number of revision times and the latest revision date** 20.7 / 07/13/2021

• **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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- **Others** No further relevant information available.
- * **Data compared to the previous version altered.**

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