

1 Identification

- **Product identifier**
- **Trade name:** SYLOID® 169
- **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**
Combustible Dust May form combustible dust concentrations in air.
- **Label elements**
- **GHS label elements**
Classified according to OSHA 2012 HCS 29 CFR 1910.1200 and the Canadian Hazardous Products Act WHMIS 2015.
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** None
- **Signal word** Warning
- **Hazard statements**
May form combustible dust concentrations in air.
- **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.
Product dust together with air may develop ignitable and explosive mixtures.
Prevent formation of dust.
WARNING: Product dust together with air may develop ignitable and explosive mixtures

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Preparation of synthetic, amorphous silicon dioxide and organic substances.

- **CAS No. and description:**

7631-86-9	amorphous silicon dioxide, chemically prepared	90-97.5%
63231-60-7	Petroleum Wax, Microcrystalline	2.5-10%

- **List of Dangerous Components** None

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4 First-aid measures

- **Description of first aid measures**
- **After inhalation:**
Supply fresh air.
Seek medical treatment in case of complaints.
- **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:** Seek medical attention. Do not induce vomiting.
- **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:**
Foam
CO2
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Hazardous combustion products**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
- **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.
Prevent formation of dust.
WARNING: Product dust together with air may develop ignitable and explosive mixtures

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Keep away from ignition sources
WARNING: Product dust together with air may develop ignitable and explosive mixtures
Prevent formation of dust.
- **Environmental precautions:**
Damp down dust with water spray.
Do not allow to enter sewers, surface or ground water.
- **Methods and material for containment and cleaning up:**
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.

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· **Protective Action Criteria for Chemicals**· **PAC-1:**

7631-86-9	amorphous silicon dioxide, chemically prepared	18 mg/m ³
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· **PAC-2:**

7631-86-9	amorphous silicon dioxide, chemically prepared	740 mg/m ³
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· **PAC-3:**

7631-86-9	amorphous silicon dioxide, chemically prepared	4,500 mg/m ³
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7 Handling and storage· **Handling:**· **Precautions for safe handling**

Prevent formation of dust.

Control equipment is recommended if dust is formed

Keep receptacles tightly sealed.

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.

Air turbulences of product dust particles will cause an explosive atmosphere.

Keep ignition sources away. Do not smoke.

· **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.

Protect from heat and direct sunlight.

Store in dry conditions.

8 Exposure controls/personal protection· **Additional information about design of technical systems:**

Dust control and material handling systems should contain explosion relief vents, an explosion suppression system or other explosion suppression or prevention controls. Ensure that dust-handling systems are designed in a manner to prevent the escape of dust into the work area. Use only appropriately classified electrical equipment and powered industrial trucks.

· **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 ³ IDLH: Immediately Dangerous to Life or Health
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PEL	Long-term value: 80mg/m ³ /%SiO ₂ mg/m ³ OSHA TWA for amorphous silica
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REL	Long-term value: 6 mg/m ³ NIOSH TWA
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TLV	Long-term value: 10* 5** mg/m ³ OSHA TWA *Total dust **Respirable fraction
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· **DNELs****7631-86-9 amorphous silicon dioxide, chemically prepared**

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

· **Additional Occupational Exposure Limit Values for possible hazards during processing:****Dust inhalable**

PEL	Long-term value: 15 mg/m ³ TWA
REL	Long-term value: 15 mg/m ³ TWA

Dust respirable

PEL	Long-term value: 5 mg/m ³ TWA
REL	Long-term value: 5 mg/m ³ TWA

· **Additional information:** Valid lists at time of 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.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

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

· **Protection of hands:**

Protective gloves

Wear gloves for the protection against mechanical hazards.

Use gloves of stable material

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

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

· **Material of gloves**

Butyl rubber, BR

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 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

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· 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: Characteristic

· pH-value at 20 °C (68 °F): 2.0 - 4.0

· Change in condition

Melting point/Melting range:	80-130 °C (176-266 °F) (wax)
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Boiling point/Boiling range:	Not determined.
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· Flash point: >180 °C (>356 °F)
(wax)

· Flammability (solid, gaseous): Product is not flammable.

· Ignition temperature: Not applicable.

· Decomposition temperature: Not applicable.

· Auto ignition temperature: 208 °C (406.4 °F) (EU A.16)

· Danger of explosion: Danger of dust explosion.

· Minimum ignition energy: 100 J < Emin < 500 J

· Explosion limits:

Lower:	125 g/m³
Upper:	Not determined.

· Vapor pressure: Not applicable.

· Density at 20 °C (68 °F): 1.91 g/cm³ (15.93895 lbs/gal)

· Bulk density at 20 °C (68 °F): 200 - 600 kg/m³

· Vapor density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with

Water at 20 °C (68 °F):	≥100 mg/l (OECD 105) (amorphous silicon dioxide, chemically prepared)
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· Coefficient of water/oil distribution: Not available.

· Viscosity:

Dynamic:	Not applicable.
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Kinematic:	Not applicable.
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· Other information: No further relevant information available.

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· Particle characteristics	Not determined.
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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**
WARNING: Product dust together with air may develop ignitable and explosive mixtures
- **Conditions to avoid**
In case of thermal decomposition caused by smouldering and incomplete combustion toxic fumes may be developed.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
Carbon dioxide
Carbon monoxide

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	>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.

63231-60-7 Petroleum Wax, Microcrystalline

Oral	LD50	>5000 mg/kg (rat) (OECD 401) ECHA 2011
Dermal	LD50	>3600 mg/kg (rat) ECHA 2014
	NOAEL	≥150 mg/kg/d (mouse) (OECD 453) 24 months ECHA 2012

- **Primary irritant effect:**

- **on the skin:**

7631-86-9 amorphous silicon dioxide, chemically prepared

Irritation of skin	IS	0 (rabbit) (OECD 404)
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63231-60-7 Petroleum Wax, Microcrystalline

Irritation of skin	IS	(rabbit) (OECD 404) ECHA 2011
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- **on the eye:**

7631-86-9 amorphous silicon dioxide, chemically prepared

Irritation of eyes	IS	0 (rabbit) (OECD 405)
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63231-60-7 Petroleum Wax, Microcrystalline

Irritation of eyes	IS	(rabbit) (OECD 405) ECHA 2011
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- **Sensitization:** No sensitizing effects known.

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- **Respiratory sensitization** No further relevant information available.

- **Skin sensitization**

63231-60-7 Petroleum Wax, Microcrystalline

Sensitization	SI	(guinea pig) (OECD 406) ECHA 2011
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- **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.

- **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/m ³ (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
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- **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
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63231-60-7 Petroleum Wax, Microcrystalline

Oral	NOAEL (2y)	5700 mg/kg/day (rat) (conducted prior to implementation of guideline) ECHA 2012
	AMES Test	≤5 mg/plate (Salmonella typhimurium) (OECD 471) negative, with and without metabolic activation ECHA 2011
	Chromosome Aberration	0.5 % (mouse) (OECD 474) Negative 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.

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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)

63231-60-7 Petroleum Wax, MicrocrystallineLL50 (96 h) | >100 mg/l (Pimephales promelas) (OECD 203)
ECHA 2012NOEC (96 h) | ≥1000 mg/l (rainbow trout) (no guideline followed)
ECHA 2012· **Water flea toxicity****7631-86-9 amorphous silicon dioxide, chemically prepared**

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

63231-60-7 Petroleum Wax, MicrocrystallineEL50 (48 h) | ≥10000 mg/l (Daphnia magna) (OECD 202)
ECHA 2012· **Algae toxicity****7631-86-9 amorphous silicon dioxide, chemically prepared**EC50 (72 h) | >10000 mg/l (Scenedesmus subspicatus) (OECD 201)
comparable substance· **Persistence and degradability** No further relevant information available.· **Other information:**

The product 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** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Additional ecological information:**· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **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.

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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.

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 Combustible Dust.

· TSCA (Toxic Substances Control Act):

7631-86-9	amorphous silicon dioxide, chemically prepared	ACTIVE
63231-60-7	Petroleum Wax, Microcrystalline	ACTIVE

· 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.

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· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value)**

63231-60-7 Petroleum Wax, Microcrystalline

· **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

63231-60-7 Petroleum Wax, Microcrystalline

· **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

63231-60-7 Petroleum Wax, Microcrystalline

· **Australian Inventory of Chemical Substances AICS**

All ingredients are listed or exempted from listing.

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

7631-86-9 amorphous silicon dioxide, chemically prepared

1-548

63231-60-7 Petroleum Wax, Microcrystalline

8-414

· **Korean Existing Chemical Inventory KECI**

7631-86-9 amorphous silicon dioxide, chemically prepared

KE-31032

63231-60-7 Petroleum Wax, Microcrystalline

KE-27787

· **TCSCA (Taiwan)**

7631-86-9 amorphous silicon dioxide, chemically prepared

EPEP4A01648271

63231-60-7 Petroleum Wax, Microcrystalline

EPEP4A01714239

· **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.

63231-60-7 Petroleum Wax, Microcrystalline

№ BT-010927 от 01.02.2019 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**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** None· **Signal word** Warning· **Hazard statements**

May form combustible dust concentrations in air.

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· **Classification system:**· **NFPA ratings (scale 0 - 4)**Health = 1
Fire = 1
Reactivity = 0· **HMIS-ratings (scale 0 - 4)**Health = 1
Fire = 1
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.

· **Department issuing SDS:** GRACE Safety & Health Department· **Other information:**

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling

· **Harmonized Tariff Schedule** 3824 9996· **Contact:**

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· **Other information:**· **Date of preparation / last revision** 07/29/2021 / 19.3· **The first date of preparation** 02/17/2015· **Number of revision times and the latest revision date** 19.4 / 07/29/2021· **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)

ICAO: International Civil Aviation Organisation

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

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

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