

SAFETY DATA SHEET

Classified in accordance 29 CFR 1910.1200

1. Identification

Product identifier: AEROSIL® R 106

Chemical name:

Cyclotetrasiloxane, octamethyl-, reaction products with silica

Other means of identification

CAS Number: 68583-49-3

Recommended restrictions

Recommended use: Antiblocking agents Flow-promoting agent. Silicone rubber Toner

Restrictions on use: Not determined.

Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation
299 Jefferson Road
Parsippany, NJ 07054
USA

Telephone : +1 973 929 8000

Fax : +1 973 929 8040

E-mail : product-regulatory-services@evonik.com

Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)

Emergency 800 681 9531 (CHEMTREC MEXICO)
+1 703 527 3887 (CHEMTREC WORLD)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Toxic to reproduction Category 2

Environmental Hazards

Chronic hazards to the aquatic environment Category 3

Label Elements

Hazard Symbol:



Signal Word:

Warning

Hazard Statement:

Suspected of damaging fertility.
 Harmful to aquatic life with long lasting effects.

Precautionary Statements

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment. Use personal protective equipment as required.

Response:

IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Chemical name:

Cyclotetrasiloxane, octamethyl-, reaction products with silica
Substances

Composition information of impurities and stabilizers

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
octamethylcyclotetrasiloxane		556-67-2	0.01 - <0.25%

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

The exact concentration has been withheld as a trade secret.

4. First-aid measures

Description of necessary 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:

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes or until all material has been removed. Obtain medical attention. No information available.

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.

Product name: AEROSIL® R 106

Personal Protection for First-aid Responders: No data available.

Most important symptoms and effects, both acute and delayed

Symptoms: None known.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No hazards which require special first aid measures.

5. Fire-fighting measures**Suitable (and unsuitable) extinguishing media**

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

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture: May be released in case of fire: carbon monoxide, carbon dioxide, organic products of decomposition.

Special protective equipment and precautions for fire-fighters

Special fire-fighting procedures: As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

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

Accidental release measures: Avoid dust formation.

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

Environmental Precautions: Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

7. Handling and storage**Handling**

Technical measures (e.g. Local and general ventilation): Ensure suitable suction/aeration at the work place and with operational machinery.

Safe handling advice: 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

the workplace threshold limit value is exceeded and/or the substance is released, use appropriate respiratory protection. Wash thoroughly after handling. Provide adequate ventilation. Follow all SDS/label precautions even after container is emptied because it may retain product residues.

Contact avoidance measures: No data available.

Storage

Safe storage conditions: Protect from heat and exposure to direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Take precautionary measures against static discharges. When repairs of the production system are to be made (e.g. welding work), the section to be repaired must be essentially free of product.

Safe packaging materials: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Biological Limit Values

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

Appropriate Engineering Controls

Ensure suitable suction/aeration at the work place and with operational machinery.

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses with side shields. In case dusts are formed, wear close fitting protective goggles.

Skin Protection

Hand Protection:

Additional Information: Wear protective gloves made of the following materials: material, rubber, leather. Additional Information: The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use., Use impermeable gloves.

Skin and Body Protection:

Safety showers and eye showers should be easily accessible. In order to determine further specifications applicable to the personal protection equipment, a hazard assessment according to the OSHA standards (29 CFR 1910.132) for personal protection equipment (PPE) is recommended before the product is used.

Respiratory Protection:

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

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.

9. Physical and chemical properties

Information on basic physical and chemical properties
Appearance

Physical state:	solid
Form:	Powder
Color:	White
Odor:	Odorless
Odor Threshold:	Not applicable
Melting Point:	Not applicable Decomposition
Boiling Point:	Not applicable Decomposition
Flammability:	Not applicable

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Flash Point:	Not applicable (solid)
Self Ignition Temperature:	No data available.
Decomposition Temperature:	> 572 °F/> 300 °C
pH:	> 3.7 (40 g/l, 20 °C) 1: 1 in suspension

Viscosity

Dynamic viscosity:	Not applicable solid
Kinematic viscosity:	Not applicable solid
Flow Time:	No data available.

Solubility(ies)

Solubility in Water:	hardly soluble
Solubility (other):	No data available.

Partition coefficient (n-octanol/water):	Not applicable
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Vapor pressure:	Not applicable
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Relative density:	No data available.
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Density:	Approximate 2 g/cm ³ (68 °F/20 °C)
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Bulk density:	No data available.
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Vapor density (air=1):	No data available.
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Particle characteristics

Particle Size:	No data available
Particle Size Distribution:	No data available
Specific surface area:	No data available.
Surface charge/Zeta potential:	No data available.

Shape: No data available
Crystallinity: Crystallinity: amorphous;
Surface treatment: Surface treatment /Coatings: Yes;

Other information

Explosive properties: No data available.
Oxidizing properties: No data available.
Minimum ignition temperature: No data available.
Evaporation Rate: Not applicable
Minimum ignition energy: Not applicable

10. Stability and reactivity

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical Stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: No hazardous reactions are known if properly handled and stored.
Conditions to avoid: Hydrophobic properties disappear at temperatures > 300°C
Incompatible Materials: No further information available
Hazardous Decomposition Products: No data available.

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 toxicological effects

Information on likely routes of exposure

Inhalation: Information on effects are given below.
Skin Contact: Information on effects are given below.
Eye contact: Information on effects are given below.
Ingestion: Information on effects are given below.

Acute toxicity (list all possible routes of exposure)

Oral

Product: LD 50 (Rat): > 5,000 mg/kg (OECD 401) comparable product
 LD 0 (Rat): 1,000 mg/kg (OECD 401) No deaths observed., comparable product

Dermal

Product: LD 50 (Rat): > 2,000 mg/kg (OECD 402) Not toxic after single exposure; comparable product

Inhalation

Product: LC 0 (Rat, 4 h): 0.139 mg/l (maximum concentration attainable in experiments), No deaths observed., comparable product
Not classified for acute toxicity based on available data.

Repeated dose toxicity

Product: No data available.

Components:

octamethylcyclotetrasiloxane
NOAEC (Rat(Female, Male), Inhalation(Vapour) , 5 days/weeks, 6 hours/day): 1.8 mg/l Subchronic toxicity
LOAEC (Rat(Female, Male), Inhalation(Vapour) , 5 days/weeks, 6 hours/day): 8.5 mg/l chronic
NOAEC (Rat(Female, Male), Inhalation(Vapour) , 5 days/weeks, 6 hours/day): 0.36 mg/l Subacute toxicity

Skin Corrosion/Irritation

Product: OECD 404 (Rabbit): Not irritating; comparable product

Serious Eye Damage/Eye Irritation

Product: Rabbit: Not irritating comparable product

Respiratory or Skin Sensitization

Product: Not known.

Carcinogenicity

Product: No evidence that cancer may be caused.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogens present or none present in regulated quantities

ACGIH: US.ACGIH Threshold Limit Values:

No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:

No carcinogens present or none present in regulated quantities

Germ Cell Mutagenicity

no evidence of mutagenic effects

In vitro

Product: Ames test (OECD 471): negative; comparable product;

In vivo

Product: No data available.

Components:

octamethylcyclotetrasiloxane
Micronucleus test (OECD 474) Inhalation - vapor (Rat): negative
Chromosomal aberration (OECD 478) Oral (Rat): negative
Chromosomal aberration (OECD 475) Inhalation - vapor (Rat, Female, Male): negative

Reproductive toxicity

Product: May damage fertility. May damage the unborn child. tested substance: octamethylcyclotetrasiloxane

Specific Target Organ Toxicity - Single Exposure

Product: no evidence for hazardous properties

Specific Target Organ Toxicity - Repeated Exposure

Product: no evidence for hazardous properties

Aspiration Hazard

Product: Not classified

Information on health hazards

Other hazards

Product: No toxicological tests are available on the product.;

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: LC 50 (Brachydanio rerio (zebrafish), 96 h): > 10,000 mg/l The reported toxic effects relate to the nominal concentration. tested substance: Silicon dioxide, derived from chemical synthesis

Aquatic Invertebrates

Product: EC 50 (Daphnia magna, 24 h): > 1,000 mg/l The reported toxic effects relate to the nominal concentration. tested substance: Silicon dioxide, derived from chemical synthesis

Toxicity to Aquatic Plants

Product: No data available.

Components:

octamethylcyclotetrasiloxane
EC 50 (Algae (Pseudokirchneriella subcapitata), 96 h): > 22 µg/l (US-EPA-method)
EC 50 (Algae (Pseudokirchneriella subcapitata), 96 h): > 22 µg/l (US-EPA-method)

Toxicity to microorganisms

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Components:

octamethylcyclotetrasiloxane
NOEC (Oncorhynchus mykiss, 93 d): 4.4 µg/l (US-EPA-method)

Aquatic Invertebrates

Product: No data available.

Components:

octamethylcyclotetrasiloxane
NOEC (Daphnia magna, 21 d): 15 µg/l (EPA OTS 797.1330)
Lowest Observed Effect Concentration (Daphnia magna, 21 d): 15 µg/l (EPA OTS 797.1330)
EC 50 (Daphnia magna, 21 d): > 15 µg/l (EPA OTS 797.1330)

Toxicity to Aquatic Plants

Product: No data available.

Components:

octamethylcyclotetrasiloxane
NOEC (Algae (Pseudokirchneriella subcapitata), 96 h): < 22 µg/l (US-EPA-method)

Toxicity to microorganisms

Product: No data available.

Persistence and Degradability

Biodegradation

Product: The methods designed to assess persistence and biodegradability are not applicable to this product, in analogy to inorganic substances.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: Not to be expected.

Partition Coefficient n-octanol / water (log Kow)

Product: Log Kow: Not applicable

Mobility in soil:

Product No remarkable mobility in soil is to be expected.

Results of PBT and vPvB assessment:

Product A PBT/vPvB evaluation is not available, since a chemical safety evaluation is not required / has not been carried out.

Other adverse effects:

Other hazards

Product: The properties of this product which are characteristics posing a threat to the environment have been calculated as per regulation (EC) No. 1272/2008. See section 2 "Hazards Identification". Harmful to aquatic life with long lasting effects.

Additional Information: No ecotoxicological data is available for this product.

13. Disposal considerations

Disposal methods: Waste must be disposed of in accordance with federal, state, provincial and local regulations.

Contaminated Packaging: Packaging material should be recycled or disposed of in accordance with federal, state and local regulations.

14. Transport information

Domestic regulation

49 CFR

Not regulated as a dangerous good

Remarks : Not dangerous according to transport regulations.

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Reproductive toxicity

US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances

None present or none present in regulated quantities.

US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

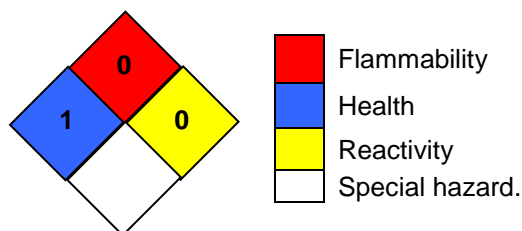
US State Regulations

US. California Proposition 65

No ingredient requiring a warning under CA Prop 65.

16. Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 03/26/2019

Version #: 2.0

Further Information: No data available.

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

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