

**SAFETY DATA SHEET****AEROSIL® R 805**

Material no.		Version	<b>5.0 / US</b>
Specification	<b>144161</b>	Revision date	<b>04/12/2016</b>
Order Number		Print Date	<b>06/10/2016</b>
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**1. Identification****1.1. Product identifier**

Trade name	AEROSIL® R 805
Chemical Name	Silane, trimethoxyoctyl-, hydrolysis products with silica
CAS-No.	92797-60-9

**1.2. Recommended use of the chemical and restrictions on use**

Relevant applications identified	Paints and varnishes. Sealants Adhesive Cosmetics
Function	Flow-promoting agent. Reinforcing agent.

**1.3. Details of the supplier of the safety data sheet**

Company	Evonik Corporation USA 299 Jefferson Road Parsippany, NJ 07054-0677 USA
Telephone	973-929-8000
Telefax	973-929-8040
Email address	Product-Regulatory-Services@Evonik.com

**1.4. 24 HOUR EMERGENCY TELEPHONE NUMBERS:**

<b>CHEMTREC - US &amp; CANADA:</b>	800-424-9300
<b>CHEMTREC MEXICO:</b>	01-800-681-9531
<b>CHEMTREC INTERNATIONAL:</b>	+1 703-527-3887 (collect calls accepted)
Product Regulatory Services	: 973-929-8060

**2. Hazards identification****2.1. Classification of the substance or mixture**

Classification according to Regulation 29CFR 1910.1200  
Combustible dust

**2.2. Label elements**

Statutory basis	Classification according to Regulation 29CFR 1910.1200
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Signal word	Warning
Hazard statement	- May form combustible dust concentrations in air
Precautionary statement Prevention	P243 - Take precautionary measures against static discharge. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. - Use with adequate ventilation. - Avoid generation or accumulation of dust. P261 - Avoid breathing dust.
Precautionary statement Reaction	P302 + P352 - IF ON SKIN: Wash with plenty of water. - In case of contact, immediately flush eyes with plenty of water. Obtain medical attention if irritation develops. - If inhaled, remove to fresh air. - If symptoms persist, consult a physician for treatment. P370 + P378 - In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
Precautionary statement Disposal	- Collect in a chemical waste container. Use only vacuum cleaners approved for combustible dust collection.

**2.3. Other hazards**

Physical Hazards Not Otherwise Classified  
Risk of dust explosion.

**Silane, trimethoxyoctyl-, hydrolysis products with silica** Not a PBT, vPvB substance as per the criteria of the REACH Regulation.

**3. Composition/information on ingredients****3.1. Substances****• Silane, trimethoxyoctyl-, hydrolysis products with silica**

CAS-No. 92797-60-9

Remarks Not a hazardous substance or mixture.

**3.2. Mixtures  
not applicable****4. First aid measures****4.1. Description of first aid measures****Inhalation**

In case product dust is released: Possible discomfort: cough, sneezing  
Move victims into fresh air.

**Skin contact**

Wash off with soap and plenty of water.

**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.

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**Ingestion**

If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.

**4.2. Most important symptoms and effects, both acute and delayed****Symptoms**

None known

**4.3. Indication of any immediate medical attention and special treatment needed**

No hazards which require special first aid measures.

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**5. Fire-fighting measures****5.1. Extinguishing media**

Suitable extinguishing media: Water spray, foam, CO<sub>2</sub>, 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.

**5.2. Special hazards arising from the substance or mixture**

May be released in case of fire: carbon monoxide, carbon dioxide, organic products of decomposition.

**5.3. Advice for firefighters**

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

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**6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Wear personal protective equipment.

**6.2. Environmental precautions**

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

**6.3. Methods and material for containment and cleaning up**

Sweep up or vacuum up spillage and collect in suitable container for disposal.

Use cleaning techniques that do not generate dust clouds if ignition sources are present.

**Additional advice**

Avoid dust formation.

If dust is present, control smoking, open flames, sparks, static electricity and friction heat.

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**7. Handling and storage****7.1. Precautions for safe handling**

Use with adequate ventilation. Minimize the escape of dust from process equipment and ventilation systems. Utilize surfaces that minimize dust accumulation and facilitate cleaning. Dust accumulations should be avoided to prevent secondary dust explosions.

**7.2. Conditions for safe storage, including any incompatibilities****Advice on protection against fire and explosion**

Take measures to prevent the build up of electrostatic charge.

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.

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Additional guidance on fire and explosion protection may be found in the consensus standard NFPA 654 for chemical dusts.

**Storage**

Keep containers tightly closed in a dry, cool place.

**Dust explosion class**

St1

Method: VDI Guideline 2263 sheet 1

Standardized max. rate of pressure increase, KSt: < 3bar·m/s  
1 m3 standard container, ignition energy 10 kJ

**8. Exposure controls/personal protection****8.1. Control parameters****• Silicon dioxide, chemically prepared**

CAS-No. 112945-52-5  
7631-86-9

Control parameters 6 mg/m3

Recommended exposure limit (REL):(NIOSH)

**8.2. Exposure controls****Personal protective equipment****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.

**Hand protection**

Wear protective gloves made of the following materials: material, rubber, leather.  
Use impermeable gloves.

**Eye protection**

Wear safety glasses with side shields. In case dusts are formed, wear close fitting protective goggles.

**Skin and body protection**

A safety shower and eye wash fountain should be readily available.

To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

**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 re-use.

**Protective measures**

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.

**9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

physical state solid  
Colour white

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Form	powder
Odour	odorless
Odour Threshold	not applicable
pH	3.5 - 5.5 (40 g / l) (20 °C) Medium: water / methanol 1: 1 in suspension
Melting point/range	not applicable decomposition
Boiling point/range	not applicable decomposition
Flash point	not applicable
Evaporation rate	not applicable
Flammability (solid, gas)	not applicable
Lower explosion limit	dust: 1500 g/m <sup>3</sup> Method: VDI 2263 1 m <sup>3</sup> standard container
Upper explosion limit	not determined
Vapour pressure	not applicable
Vapour density	not applicable
Density	ca. 2.2 g/cm <sup>3</sup> (20 °C)
Water solubility	> 1 mg/l
Partition coefficient: n-octanol/water	not applicable
Autoignition temperature	460 °C Method: VDI Guideline 2263 sheet 1
Thermal decomposition	> 150 °C
Viscosity, dynamic	not applicable

**9.2. Other information**

Explosiveness	Dust, which can be formed through abrasion, can combine with air to form a mixture which can be explosive.  not determined
Minimum ignition energy	> 1 kJ  <= 10 kJ Method: VDI Guideline 2263 sheet 1

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	1 m3 standard container
maximum absolute explosive pressure	2.8 bar Method: VDI Guideline 2263 sheet 1 1 m3 standard container
Tapped density	ca. 60 g / l Method: DIN / ISO 787/11

**10. Stability and reactivity****10.1. Reactivity**

No dangerous reaction known under conditions of normal use.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Possibility of hazardous reactions      Self-heating may occur

**10.4. Conditions to avoid**

Hydrophobic properties disappear at temperatures > 200°C

**10.5. Incompatible materials**

No further information available

**10.6. Hazardous decomposition products**

decomposition products with heating above decomposition temperature  
Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), organic products of decomposition

Stable under normal conditions.  
Product will not undergo hazardous polymerization.

**11. Toxicological information****11.1. Information on toxicological effects**

Acute oral toxicity	LD50 Rat: > 5000 mg/kg Method: analogous OECD method
Skin irritation	Rabbit Not irritating. Method: OECD Test Guideline 404
Eye irritation	Rabbit Not irritating. Method: OECD Test Guideline 405
Sensitization	not known
Assessment of STOT single exposure	no evidence for hazardous properties
Assessment of STOT repeat exposure	No data available
Risk of aspiration toxicity	No aspiration toxicity classification

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Gentotoxicity in vitro	Ames test <i>S. typhimurium</i> / <i>E. coli</i> Negative literature
Mutagenicity assessment	no evidence of mutagenic effects
Carcinogenicity	No data available
carcinogenicity assessment	Contains no carcinogenic substances as defined by NTP, IARC and/or OSHA.
Toxicity to reproduction	No data available
Human experience	Silicosis or other product specific illnesses of the respiratory tract have not been reported.
Further information	An Expert Judgment stated that no classification is necessary based on present knowledge.

**12. Ecological information****12.1. Toxicity**

*No ecotoxicological data is available for this product.*

Toxicity to fish  
LC50 (*Brachydanio rerio*): > 10000 mg/l / 96 h  
Test substance: Silicon dioxide, derived from chemical synthesis  
Method: OECD 203  
The reported toxic effects relate to the nominal concentration.

Toxicity in aquatic invertebrates  
EC50 *Daphnia magna*: > 1000 mg/l / 24 h  
Test substance: Silicon dioxide, derived from chemical synthesis  
Method: OECD 202  
The reported toxic effects relate to the nominal concentration.

**12.2. Persistence and degradability**

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

**12.3. Bioaccumulative potential**

Bioaccumulation  
Not to be expected.

**12.4. Mobility in soil**

Mobility  
No remarkable mobility in soil is to be expected.

**12.5. Other adverse effects**

Further Information  
An Expert Judgment stated that no classification is necessary based on present knowledge.

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**13. Disposal considerations****13.1. Waste treatment methods****Product**

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

**Uncleaned packaging**

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

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**14. Transport information****Not dangerous according to transport regulations.**

- 14.1. UN number: --
- 14.2. UN proper shipping name: --
- 14.3. Transport hazard class(es): --
- 14.4. Packing group: --
- 14.5. Environmental hazards (Marine pollutant): --
- 14.6. Special precautions for user: Yes
- Not subject to Division 4.2 in packagings equal or less than 3 cbm. If in packagings (bags, big bags or silos) exceeding a volume of 3 cbm, the material has to be classified in Division 4.2, UN 3190, III. Air shipments must not exceed a quantity of 3 cbm (in big bags or in paper bags on pallets as well) in the same aircraft.
- To be stowed away from any source of heat (such as heatable fuel tanks, steam piping, etc.)

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**15. Regulatory information****US Federal Regulations****OSHA**

If listed below, chemical specific standards apply to the product or components:

- None listed

**Clean Air Act Section (112)**

If listed below, components present at or above the de minimus level are hazardous air pollutants:

- None listed

**CERCLA Reportable Quantities**

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- None listed



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**SARA Title III Section 311/312 Hazard Categories**

The product meets the criteria only for the listed hazard classes:

- Fire Hazard

**SARA Title III Section 313 Reportable Substances**

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- None listed

**Toxic Substances Control Act (TSCA)**

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None listed

**State Regulations**

The Listing requirements of the Right to Know (RTK) legislation varies by state. All information for NJ, PA, MA and other states can be derived from the listing of hazardous and non-hazardous components in section 2 and 15 of this MSDS.

**California Proposition 65**

A warning under the California Drinking Water Act is required only if listed below:

- None listed

An employer using HMIS/NFPA labeling must through training ensure that its employees are fully aware of the hazards of the chemicals used.

**NFPA Ratings**

Health :	1
Flammability :	1
Reactivity :	0

**16. Other information****Further information**

Revision date 04/12/2016

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

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**Legend**

<b>ACC</b>	American Chemistry Council
<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>ACS</b>	Advisory Committee on Sustainability
<b>ADI</b>	Acceptable Daily Intake
<b>ASTM</b>	American Society for Testing and Materials
<b>ATP</b>	Adaptation to Technical Progress
<b>BCF</b>	Bioconcentration factor
<b>BOD</b>	Biochemical oxygen demand
<b>c.c.</b>	closed cup
<b>CAO</b>	Cargo Aircraft Only
<b>Carc</b>	Carcinogen
<b>CAS</b>	Chemical Abstract Services
<b>CDN</b>	Canada
<b>CEPA</b>	Canadian Environmental Protection Act
<b>CERCLA</b>	Comprehensive Environmental Response – Compensation and Liability Act
<b>CFR</b>	Code of Federal Regulations
<b>CMR</b>	carcinogenic-mutagenic-toxic for reproduction
<b>COD</b>	Chemical oxygen demand
<b>DIN</b>	German Institute for Standardization
<b>DM EL</b>	Derived minimum effect level
<b>DNEL</b>	Derived no effect level
<b>DOT</b>	Department of Transportation
<b>EC50</b>	half maximal effective concentration
<b>EPA</b>	Environmental Protection Agency
<b>Erc50</b>	Reduction of Growth Rate
<b>ERG</b>	Emergency Response Guide Book
<b>FDA</b>	Food and Drug Administration
<b>GHS</b>	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
<b>GLP</b>	Good Laboratory Practice
<b>GMO</b>	Genetic Modified Organism
<b>HCS</b>	Hazard Communication Standard
<b>HMIS</b>	Hazardous Materials Identification System
<b>IARC</b>	International Agency for Research on Cancer
<b>IATA</b>	International Air Transport Association
<b>IBC</b>	Intermediate Bulk Container
<b>ICAO-TI</b>	International Civil Aviation Organization- Technical Instructions
<b>ICCA</b>	International Council of Chemical Association
<b>ID</b>	Identification number
<b>IMDG</b>	International Maritime Dangerous Goods
<b>IUPAC</b>	International Union of Pure and Applied Chemistry
<b>ISO</b>	International Organization For Standardization
<b>LC50</b>	50 % Lethal Concentration
<b>LD50</b>	50 % Lethal Dose
<b>L(E)C50</b>	LC50 or EC50
<b>LOAEL</b>	Low est observed adverse effect level
<b>LOEL</b>	Low est observed effect level
<b>MARPOL</b>	International Convention for the Prevention of Pollution from Ships
<b>NFPA</b>	National Fire Protection Association

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<b>NOAEL</b>	No observed adverse effect level
<b>NOEC</b>	no observed effect concentration
<b>NOEL</b>	no observed effect level
<b>o. c.</b>	open cup
<b>OECD</b>	Organisation for Economic Cooperation and Development
<b>OEL</b>	Occupational Exposure Limit
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PBT</b>	Persistent, bioaccumulative, toxic
<b>PEC</b>	Predicted effect concentration
<b>PNEC</b>	Predicted no effect concentration
<b>RQ</b>	Reportable Quantity
<b>SDS</b>	Safety Data Sheet
<b>STOT</b>	Specific Target Organ Toxicity
<b>UN</b>	United Nations
<b>vPvB</b>	very persistent, very bioaccumulative
<b>voc</b>	volatile organic compounds
<b>WHMIS</b>	Workplace Hazardous Materials Information System
<b>WHO</b>	World Health Organization