



SAFETY DATA SHEET

MATERION

1. Identification

Product identifier Silicon Dioxide Product
Other means of identification None.
Manufacturer/Importer/Supplier/Distributor information
Manufacturer
Company name Materion Advanced Materials Group
Address 42 Mt. Ebo Road South
Brewster, NY 10509
United States
Telephone Supplier Phone 1+845.279.0900
Website materion.com
E-mail Not available.
Emergency phone number Chemtrec 1+703.527.3887

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements

Hazard symbol None.
Signal word None.
Hazard statement Not available.
Precautionary statement
Prevention Not available.
Response Not available.
Storage Not available.
Disposal Not available.

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

Supplemental information None.

3. Composition/information on ingredients

Substances

| Chemical name | Common name and synonyms | CAS number | % |
|-------------------------|--------------------------|------------|-----------|
| Silicon Dioxide Product | | 7631-86-9 | 100 - 100 |

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact Not available.
Eye contact Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion Not available.

Most important symptoms/effects, acute and delayed Dusts may irritate the respiratory tract, skin and eyes.

5. Fire-fighting measures

Suitable extinguishing media Not available.
Unsuitable extinguishing media Not available.
Specific hazards arising from the chemical Not applicable.
Special protective equipment and precautions for firefighters Not available.
Fire fighting equipment/instructions Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up The product is immiscible with water and will spread on the water surface. Stop the flow of material, if this is without risk. Collect dust using a vacuum cleaner equipped with HEPA filter.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-3 (29 CFR 1910.1000)

| Material | Type | Value |
|--|------|-----------|
| Silicon Dioxide Product (CAS 7631-86-9) | TWA | 0.8 mg/m3 |
| | | 20 mppcf |

US. NIOSH: Pocket Guide to Chemical Hazards

| Material | Type | Value |
|--|------|---------|
| Silicon Dioxide Product (CAS 7631-86-9) | TWA | 6 mg/m3 |

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

Control parameters Follow standard monitoring procedures.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Not available.

Other Not available.

| | |
|---------------------------------------|---|
| Respiratory protection | Wear respirator with dust filter. |
| Thermal hazards | Not available. |
| General hygiene considerations | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

9. Physical and chemical properties

Appearance

| | |
|---|--------------------------|
| Physical state | Solid. |
| Form | Powder. |
| Color | Not available. |
| Odor | Not applicable. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | 3110 °F (1710 °C) |
| Initial boiling point and boiling range | 4046 °F (2230 °C) |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | < 0.0000001 kPa at 25 °C |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | Insoluble |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not applicable. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Heat of combustion (NFPA 30B) | 0 kJ/g |
| Molecular formula | O ₂ Si |
| Molecular weight | 60.09 g/mol |

10. Stability and reactivity

| | |
|---|--------------------------------------|
| Reactivity | Not available. |
| Chemical stability | Not available. |
| Possibility of hazardous reactions | Not available. |
| Conditions to avoid | Contact with incompatible materials. |

Incompatible materials Fluorine. Chlorine.
Hazardous decomposition products Not available.

11. Toxicological information

Information on likely routes of exposure

Inhalation Dust may irritate respiratory system.
Skin contact Dust or powder may irritate the skin.
Eye contact Dust may irritate the eyes.
Ingestion Not available.

Symptoms related to the physical, chemical and toxicological characteristics Dusts may irritate the respiratory tract, skin and eyes.

Information on toxicological effects

Acute toxicity

| Product | Species | Test Results |
|---|---------|---------------|
| Silicon Dioxide Product (CAS 7631-86-9) | | |
| <u>Acute</u> | | |
| Oral | | |
| LD50 | Mouse | > 15000 mg/kg |
| | Rat | > 22500 mg/kg |

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Not available.

Serious eye damage/eye irritation Not available.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization Not available.

Germ cell mutagenicity Not available.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Silicon Dioxide Product (CAS 7631-86-9) 3 Not classifiable as to carcinogenicity to humans.

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

Not listed.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity No ecotoxicity data noted for the ingredient(s).

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

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

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US - New Jersey RTK - Substances: Listed substance

Silicon Dioxide Product (CAS 7631-86-9)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Silicon Dioxide Product (CAS 7631-86-9)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Silicon Dioxide Product (CAS 7631-86-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Silicon Dioxide Product (CAS 7631-86-9)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

Not Listed.

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

Issue date 06-18-2015

Version # 01

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