



# SAFETY DATA SHEET

**MATERION**

## 1. Identification

**Product identifier** Aluminum Oxide-Iron Oxide (Al<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub> 96-4)

**Other means of identification**

**SDS number** A-MSDS0091

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company name** Materion Advanced Chemicals Inc.

**Address**  
407 N 13th Street  
1316 W. St. Paul Avenue  
Milwaukee, WI 53233  
United States

**Telephone** 414.212.0257

**E-mail** advancedmaterials@materion.com

**Contact person** Noreen Atkinson

**Emergency phone number** Chemtrec 800.424.9300

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Not classified.

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Danger

**Hazard statement** Causes serious eye damage. May cause respiratory irritation. Causes damage to organs (respiratory system) through prolonged or repeated exposure.

**Precautionary statement**

**Prevention** Do not breathe dust. Avoid breathing dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear eye/face protection.

**Response** If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. Call a poison center/doctor.

**Storage** Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

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

**Supplemental information** None.

## 3. Composition/information on ingredients

**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Aluminum Oxide	Aluminum trioxide	1344-28-1	90 - 100

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

#### 4. First-aid measures

<b>Inhalation</b>	If dust from the material is inhaled, remove the affected person immediately to fresh air. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Move to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Irritation of eyes and mucous membranes. May cause temporary blindness and severe eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Discomfort in the chest. Shortness of breath. Coughing. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Treat symptomatically. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Not applicable.
<b>Special protective equipment and precautions for firefighters</b>	Wear suitable protective equipment.
<b>Fire fighting equipment/instructions</b>	In the event of fire, cool tanks with water spray.
<b>Specific methods</b>	Cool containers exposed to flames with water until well after the fire is out.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Local authorities should be advised if significant spillages cannot be contained. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation.
<b>Methods and materials for containment and cleaning up</b>	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect dust using a vacuum cleaner equipped with HEPA filter. Avoid the generation of dusts during clean-up. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Avoid dust formation. Guard against dust accumulation of this material. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust from this material. Do not get this material in contact with eyes. Avoid contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Wash hands thoroughly after handling. Practice good housekeeping.

### Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Avoid dust formation. Guard against dust accumulation of this material. Keep out of the reach of children.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
aluminum oxide (CAS 1344-28-1)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
aluminum oxide (CAS 1344-28-1)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.

### Biological limit values

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

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear eye/face protection. Use tight fitting goggles if dust is generated.

#### Skin protection

##### Hand protection

Wear protective gloves. Not normally needed.

##### Other

Wear appropriate chemical resistant clothing.

#### Respiratory protection

Wear respirator with dust filter. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

#### Thermal hazards

Not available.

### General hygiene considerations

Do not breathe dust. Do not get in eyes. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Appearance

Powder.

#### Physical state

Solid.

#### Form

Solid. Powder

#### Color

Not available.

### Odor

Not applicable.

### Odor threshold

Not available.

### pH

Not available.

### Melting point/freezing point

1049 °F (565 °C) estimated

### Initial boiling point and boiling range

5396 °F (2980 °C) estimated

### 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	0.00001 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	4.05 g/cm <sup>3</sup> estimated
Specific gravity	4.05 estimated

## 10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid spread of dust.
Incompatible materials	Acids. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	Due to lack of data the classification is not possible.
Eye contact	Causes serious eye damage.
Ingestion	Based on available data, the classification criteria are not met.

**Symptoms related to the physical, chemical and toxicological characteristics** Permanent eye damage including blindness could result. Discomfort in the chest. Shortness of breath. Coughing.

### Information on toxicological effects

Acute toxicity	May cause respiratory irritation.
Skin corrosion/irritation	Due to lack of data the classification is not possible.
Serious eye damage/eye irritation	Causes serious eye damage. Dust in the eyes will cause irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Due to lack of data the classification is not possible.
Skin sensitization	Due to lack of data the classification is not possible.
Germ cell mutagenicity	Due to lack of data the classification is not possible.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

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

Not listed.

**Reproductive toxicity** Due to lack of data the classification is not possible.

**Specific target organ toxicity - single exposure** Respiratory tract irritation.

**Specific target organ toxicity - repeated exposure** Causes damage to organs ( ) through prolonged or repeated exposure.

**Aspiration hazard** Due to lack of data the classification is not possible.

**Chronic effects** Causes damage to organs through prolonged or repeated exposure.

## 12. Ecological information

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

**Persistence and degradability** No data is available on the degradability of this product.

**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. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazardous waste code** Not regulated.

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

## 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** CERCLA/SARA Hazardous Substances - Not applicable.

All components are on the U.S. EPA TSCA Inventory List.

**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**                    No

**SARA 313 (TRI reporting)**

<b>Chemical name</b>	<b>CAS number</b>	<b>% by wt.</b>
Aluminum Oxide	1344-28-1	90 - 100

**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**                    California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US - New Jersey RTK - Substances: Listed substance**

Aluminum Oxide (CAS 1344-28-1)

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

Not listed.

**US. Massachusetts RTK - Substance List**

Aluminum Oxide (CAS 1344-28-1)

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

Aluminum Oxide (CAS 1344-28-1)

**US. Pennsylvania RTK - Hazardous Substances**

Aluminum Oxide (CAS 1344-28-1)

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

Aluminum Oxide (CAS 1344-28-1)

**US. Rhode Island RTK**

Aluminum Oxide (CAS 1344-28-1)

**US. California Proposition 65**

Not Listed.

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

**Issue date**                                    05-26-2015

**Version #**                                    01

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