



# SAFETY DATA SHEET

**MATERION**

## 1. Identification

**Product identifier** Aluminum Oxide

**Other means of identification**

SDS number G31

CAS number 1302-74-5

**Recommended use** Manufacture of computer, electronic and optical products, electrical equipment  
Scientific research and development  
Other: Manufacture of medical and defense equipment

**Recommended restrictions** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
Consumer uses: Private households (= general public = consumers)

## Manufacturer/Importer/Supplier/Distributor information

### Manufacturer

**Company name** Materion Advanced Materials Germany GmbH

**Address** Borsigstrasse 10  
Germany

**Telephone** 49.60.23.91.82.0

**Website** www.materion.com

**E-mail** Materion.Germany@materion.com

**Contact person** Hermann Schmiing

**Emergency phone number** 49.60.23.91.82.0

**Supplier** See above.

## 2. Hazard identification

**Physical hazards** Not classified.

**Health hazards** Not classified.

**Environmental hazards** Not classified.

**Label elements**

**Hazard symbol** None.

**Signal word** None.

**Hazard statement** The material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated.

**Precautionary statement**

**Prevention** Observe good industrial hygiene practices.

**Response** Wash hands after handling.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Other hazards** None known.

**Supplemental information** For further information, please contact the Product Stewardship Department at +1.800.862.4118.

## 3. Composition/information on ingredients

### Substances

Chemical name	Common name and synonyms	CAS number	%
Corundum		1302-74-5	100

## 4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	None known.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	None known.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. 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	Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Keep locked up.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Material	Type	Value
Corundum (CAS 1302-74-5)	TWA	10 mg/m <sup>3</sup>

#### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Material	Type	Value	Form
Corundum (CAS 1302-74-5)	TWA	3 mg/m <sup>3</sup>	Respirable fraction.
		10 mg/m <sup>3</sup>	Total dust.

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

Material	Type	Value	Form
Corundum (CAS 1302-74-5)	TWA	3 mg/m <sup>3</sup>	Respirable fraction.
		10 mg/m <sup>3</sup>	Inhalable fraction.

**Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)**

Material	Type	Value	Form
Corundum (CAS 1302-74-5)	TWA	10 mg/m <sup>3</sup>	Total dust.

**Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)**

Material	Type	Value
Corundum (CAS 1302-74-5)	15 minute	20 mg/m <sup>3</sup>
	8 hour	10 mg/m <sup>3</sup>

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear gloves to prevent metal cuts and skin abrasions during handling.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	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**

<b>Physical state</b>	Solid.
<b>Form</b>	Solid Powder.
<b>Color</b>	White.
<b>Odor</b>	None.
<b>Odor threshold</b>	Not applicable.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	Not applicable.
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	None known.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - lower (%) temperature</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Explosive limit - upper (%) temperature</b>	Not applicable.

Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not applicable.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Other information	
Explosive properties	Not explosive.
Molecular formula	Al <sub>2</sub> O <sub>3</sub>
Molecular weight	101.96 g/mol
Oxidizing properties	Not oxidizing.

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Acids. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	Not likely, due to the form of the product.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Not relevant, due to the form of the product.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics  
None known.

### Information on toxicological effects

Acute toxicity	None known.
Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	None known.

### Respiratory or skin sensitization

Canada - Alberta OELs: Irritant  
Corundum (CAS 1302-74-5) Irritant

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	Not a skin sensitizer.

Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.
Reproductive toxicity	Not classified.

<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	None known.

## 12. Ecological information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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

### **TDG**

Not regulated as dangerous goods.

### **IATA**

Not regulated as dangerous goods.

### **IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

## 15. Regulatory information

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

### **Controlled Drugs and Substances Act**

Not regulated.

### **Export Control List (CEPA 1999, Schedule 3)**

Not listed.

### **Greenhouse Gases**

Not listed.

### **Precursor Control Regulations**

Not regulated.

### **International regulations**

**Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Kyoto protocol**

Not applicable.

**Montreal Protocol**

Not applicable.

**Basel Convention**

Not applicable.

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information**

**Issue date** 03-07-2019

**Version #** 01

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