



# SAFETY DATA SHEET

**MATERION**

## Section 1: Identification of the hazardous chemical and of the supplier

**Product identifier** Silicon Aluminum Targets

**Other means of identification**  
**SDS number** Q06

**Recommended use of the chemical and restrictions on use**  
**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)

### Details of principal suppliers

#### Manufacturer

**Company name** Materion Advanced Materials  
**Address** 6070 Parkland Boulevard  
 Mayfield Heights, OH 44124  
 United States

**Telephone** EH&S 1.216.383.4019  
**Website** www.materion.com  
**E-mail** ehs@materion.com  
**Contact person** Theodore Knudson  
**Emergency phone number** See Section 16.

## Section 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** Get medical advice/attention if you feel unwell.  
**Storage** Store away from incompatible materials.  
**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards which do not result in classification** None known.

**Supplemental information** For further information, please contact the Product Stewardship Department at +1.216.383.4019.

## Section 3: Composition and information of the ingredients of the hazardous chemical

### Mixtures

Hazardous components			
Chemical name	Common name and synonyms	CAS number	%
Aluminum		7429-90-5	5 - 10
Non-hazardous components			
Chemical name	Common name and synonyms	CAS number	%
Silicon		7440-21-3	90 - 95

## Section 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	Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Under normal conditions of intended use, this material does not pose a risk to health.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## Section 5: Fire-fighting measures

Suitable extinguishing media	Powder. Dry sand.
Unsuitable extinguishing media	Carbon dioxide (CO <sub>2</sub> ).
Specific hazards arising from the chemical	Non-combustible, substance itself does not burn.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
HAZCHEM code	None.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

## Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Environmental precautions	No special environmental precautions required.
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. For waste disposal, see section 13 of the SDS.

## Section 7: Handling and storage

Precautions for safe handling	Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store away from incompatible materials (see Section 10 of the SDS).

## Section 8: Exposure controls and personal protection

### Occupational exposure limits

Malaysia. OELs. (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m <sup>3</sup>	Welding fume.
		5 mg/m <sup>3</sup>	Pyrophoric powder.
		10 mg/m <sup>3</sup>	Dust.
Silicon (CAS 7440-21-3)	TWA	10 mg/m <sup>3</sup>	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.

Biological limit values	No biological exposure limits noted for the ingredient(s).
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**Appropriate engineering controls** 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.

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

**Eye/face protection** If contact is likely, safety glasses with side shields are recommended.

**Skin protection**

**Hand protection** Suitable gloves can be recommended by the glove supplier. Wear gloves to prevent metal cuts and skin abrasions during handling.

**Other** Wear suitable protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**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.

## Section 9: Physical and chemical properties

### Appearance

**Physical state** Solid.

**Form** Solid. Particulate.

**Color** Grey.

**Odor** None.

**Odor threshold** Not applicable.

**pH** Not applicable.

**Melting point/freezing point** 1076 - 2480 °F (580 - 1360 °C) estimated / Not applicable.

**Initial boiling point and boiling range** Not applicable

**Flash point** Not applicable.

**Evaporation rate** Not applicable.

**Flammability (solid, gas)** None known.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not applicable.

**Flammability limit - upper (%)** Not applicable.

**Explosive limit - lower (%)** Not applicable.

**Explosive limit - lower (%) temperature** Not applicable.

**Explosive limit - upper (%)** Not applicable.

**Explosive limit - upper (%) temperature** 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

**Density** 2.31 - 2.36 g/cm<sup>3</sup>

<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.

## Section 10: Stability and reactivity

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

## Section 11: Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	Not likely, due to the form of the product.
<b>Eye contact</b>	Not likely, due to the form of the product.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	None known.
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### Information on toxicological effects

<b>Acute toxicity</b>	None known.
<b>Skin corrosion/irritation</b>	Not likely, due to the form of the product.
<b>Serious eye damage/eye irritation</b>	None known.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	Not a skin sensitizer.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

<b>Reproductive toxicity</b>	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.

## Section 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.
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Product	Species	Test Results
Silicon Aluminum Targets		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Fish
		3.1 mg/l, 96 hours estimated

<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
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<b>Bioaccumulative potential</b>	No data available.
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<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.

### Section 13: Disposal information

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<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.

### Section 14: Transportation information

#### ADR

Not regulated as dangerous goods.

#### RID

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.

**HAZCHEM code** None.

### Section 15: Regulatory information

#### Safety, health and environmental regulations specific for the product in question

**Active Ingredients of Pesticide Product (Pesticide Act 1974, First Schedule, as amended through October 1, 2004)**

Not regulated.

**CWC (Chemical Weapons Convention) Act 2005, Schedules 1-3, as amended through CWC Regulations 2007, October 5, 2007)**

Not regulated.

**Ozone Depleting Substances (ODS) (Environmental Quality (Prohibition on the Use of CFC and Other Gases as Propellants and Blowing Agents) Order 1993, Dec. 31, 1993)**

Not regulated.

**Prohibited Use of Substances [Occupational Safety and Health (Prohibition of Use of Substance) Order 1999]**

Not regulated.

#### International regulations

##### Stockholm Convention

Not applicable.

##### Rotterdam Convention

Not applicable.

##### Montreal Protocol

Not applicable.

##### Kyoto protocol

Not applicable.

##### Basel Convention

Not applicable.

### Section 16: Other information

**Issue date** 08-20-2020

**Revision date** 09-27-2021

<b>Version #</b>	02
<b>List of abbreviations</b>	Not available.
<b>References</b>	Not available.
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<b>Further information</b>	<p>Transportation Emergency Call Chemtrec at: International: 703.741.5970 Spain: 900.868.538 Switzerland: 0800.564.402 Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059</p>
<b>Other information</b>	Revised information in Section 16.