



# PRODUCT INFORMATION SHEET

**MATERION**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name or designation of the mixture** Aluminum Scandium

**Registration number** -

**Document number** 341

**Synonyms** None.

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

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

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

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

#### Supplier

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

#### Division

**Telephone** 1.216.383.4019

**e-mail** ehs@materion.com

**Contact person** Theodore Knudson

**1.4. Emergency telephone number** See Section 16.

### 1.3. Details of the supplier of the product information sheet

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**1.4. Emergency telephone number** See Section 16.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

**Contains:** Aluminium, Scandium

**Hazard pictograms** None.

**Signal word** None.

**Hazard statements** The products are classified as articles and, as such, do not present a physical or health hazard in the present form. If the products are processed or handled in ways that generate particles (dust, fume, particles and/or powder), a potential health hazard could exist and risk management measures must be taken to minimize risk.

## Precautionary statements

<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.

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

**2.3. Other hazards** This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Aluminium	75 - < 95	7429-90-5 231-072-3	-	013-002-00-1	
<b>Classification:</b> Aquatic Acute 1;H400, Aquatic Chronic 1;H410					
Scandium	5 - < 25	7440-20-2 231-129-2	-	-	
<b>Classification:</b> -					

#### List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.  
M: M-factor  
vPvB: very persistent and very bioaccumulative substance.  
PBT: persistent, bioaccumulative and toxic substance.  
#: This substance has been assigned Union workplace exposure limit(s).  
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**Composition comments** The full text for all H-statements is displayed in section 16.

## SECTION 4: First aid measures

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 4.1. Description of 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.  
**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

**4.2. Most important symptoms and effects, both acute and delayed** Exposure may cause temporary irritation, redness, or discomfort.

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

## SECTION 5: Firefighting measures

**General fire hazards** No unusual fire or explosion hazards noted.

### 5.1. Extinguishing media

**Suitable extinguishing media** Powder. Dry sand.  
**Unsuitable extinguishing media** Water. Do not use water jet as an extinguisher, as this will spread the fire. Carbon dioxide (CO<sub>2</sub>).

**5.2. Special hazards arising from the substance or mixture** None known.

### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Wear suitable protective equipment.

**Special firefighting procedures** Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** Wear appropriate personal protective equipment.

**For emergency responders** Keep unnecessary personnel away. For personal protection, see section 8 of the Product Information Sheet.

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

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

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. The product is insoluble in water.

**6.4. Reference to other sections** For personal protection, see section 8 of the Product Information Sheet. For waste disposal, see section 13 of the Product Information Sheet.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Minimise dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure.

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

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

ANNEX 1, PART 1 Categories of dangerous substances

Hazard categories in accordance with Regulation (EC) No 1272/2008

- E1 Hazardous to the Aquatic Environment Acute (Lower-tier requirements = 100 tonnes; Upper-tier requirements = 200 tonnes)

- E1 Hazardous to the Aquatic Environment Chronic (Lower-tier requirements = 100 tonnes; Upper-tier requirements = 200 tonnes)

**7.3. Specific end use(s)** Observe industrial sector guidance on best practices.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

**Romania. OELs. Limit Values of Chemical Agents at Workplace (Regulation 1.218/2006, M.O 845, Annex 1, 3&4, as amended)**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	STEL	3 mg/m <sup>3</sup>	Fume.
		10 mg/m <sup>3</sup>	Dust.
	TWA	3 mg/m <sup>3</sup>	Dust.
		1 mg/m <sup>3</sup>	Fume.

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

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

### 8.2. Exposure controls

<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. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>General information</b>	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<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>Hygiene measures</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.
<b>Environmental exposure controls</b>	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Colour</b>	Silver-white.
<b>Odour</b>	None.
<b>Odour threshold</b>	Not applicable.
<b>Melting point/freezing point</b>	660 °C (1220 °F) estimated / Not applicable.
<b>Boiling point or initial boiling point and boiling range</b>	Not applicable.
<b>Flammability</b>	None known.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower ( %)</b>	Not applicable.
	Not applicable.
<b>Explosive limit - lower ( % ) temperature</b>	Not applicable.
<b>Explosive limit – upper ( %)</b>	Not applicable.
	Not applicable.
<b>Explosive limit - upper ( % ) temperature</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>pH</b>	Not applicable.
<b>Kinematic viscosity</b>	Not applicable.
<b>Solubility</b>	
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water) (log value)</b>	Not applicable.
<b>Vapour pressure</b>	Not applicable.
<b>Density and/or relative density</b>	
<b>Density</b>	2,70 g/cm <sup>3</sup> estimated
<b>Relative density</b>	Not applicable.

**Vapour density** Not applicable.

**Particle characteristics** Not available.

## 9.2. Other information

**9.2.1. Information with regard to physical hazard classes** No relevant additional information available.

### 9.2.2. Other safety characteristics

**Evaporation rate** Not applicable.

**Specific gravity** 2,7 estimated

**Viscosity** Not applicable.

## SECTION 10: Stability and reactivity

**10.1. Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**10.2. Chemical stability** Material is stable under normal conditions.

**10.3. Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**10.4. Conditions to avoid** Contact with incompatible materials.

**10.5. Incompatible materials** Strong oxidising agents.

**10.6. Hazardous decomposition products** No hazardous decomposition products are known.

## SECTION 11: Toxicological information

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

### Information on likely routes of exposure

**Inhalation** Not likely, due to the form of the product.

**Skin contact** Not relevant, due to the form of the product.

**Eye contact** Not relevant, due to the form of the product.

**Ingestion** Not likely, due to the form of the product.

**Symptoms** None known.

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity** Due to partial or complete lack of data the classification is not possible.

**Skin corrosion/irritation** Not likely, due to the form of the product.

**Serious eye damage/eye irritation** Not likely, due to the form of the product.

**Respiratory sensitisation** Not a respiratory sensitiser.

**Skin sensitisation** Not a skin sensitiser.

**Germ cell mutagenicity** Due to partial or complete lack of data the classification is not possible.

**Carcinogenicity** Not classifiable as to carcinogenicity to humans.

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

**Specific target organ toxicity - single exposure** Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - repeated exposure** Due to partial or complete lack of data the classification is not possible.

**Aspiration hazard** Not an aspiration hazard.

**Mixture versus substance information** No information available.

### 11.2. Information on other hazards

**Endocrine disrupting properties** This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

**Other information** This product has no known adverse effect on human health.

## SECTION 12: Ecological information

**12.1. Toxicity** 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.

Product	Species	Test Results
Aluminum Scandium		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Fish
		0,2213 mg/l, 96 hours estimated

Components	Species	Test Results
Aluminium (CAS 7429-90-5)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Grass carp, white amur (Ctenopharyngodon idella)
		0,21 - 0,31 mg/l, 96 hours

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

**12.3. Bioaccumulative potential** No data available.

**Partition coefficient n-octanol/water (log Kow)** Not available.

**Bioconcentration factor (BCF)** Not available.

**12.4. Mobility in soil** No data available.

**12.5. Results of PBT and vPvB assessment** This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

**12.6. Endocrine disrupting properties** This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

**12.7. Other adverse effects** 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 considerations

### 13.1. Waste treatment methods

**Residual waste** 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.

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

**Disposal methods/information** Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**Special precautions** Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

**14.1. UN number** Not regulated as dangerous goods.

**14.2. UN proper shipping name** Not regulated as dangerous goods.

### 14.3. Transport hazard class(es)

**Class** Not assigned.

**Subsidiary risk** -

**Hazard No. (ADR)** Not assigned.

**Tunnel restriction code** Not assigned.

**14.4. Packing group** -

**14.5. Environmental hazards** No.

**14.6. Special precautions for user** Not assigned.

### RID

**14.1. UN number** Not regulated as dangerous goods.

**14.2. UN proper shipping name** Not regulated as dangerous goods.  
**14.3. Transport hazard class(es)**  
**Class** Not assigned.  
**Subsidiary risk** -  
**14.4. Packing group** -  
**14.5. Environmental hazards** No.  
**14.6. Special precautions for user** Not assigned.

#### ADN

**14.1. UN number** Not regulated as dangerous goods.  
**14.2. UN proper shipping name** Not regulated as dangerous goods.  
**14.3. Transport hazard class(es)**  
**Class** Not assigned.  
**Subsidiary risk** -  
**14.4. Packing group** -  
**14.5. Environmental hazards** No.  
**14.6. Special precautions for user** Not assigned.

#### IATA

**14.1. UN number** Not regulated as dangerous goods.  
**14.2. UN proper shipping name** Not regulated as dangerous goods.  
**14.3. Transport hazard class(es)**  
**Class** Not assigned.  
**Subsidiary risk** -  
**14.4. Packing group** -  
**14.5. Environmental hazards** No.  
**14.6. Special precautions for user** Not assigned.

#### IMDG

**14.1. UN number** Not regulated as dangerous goods.  
**14.2. UN proper shipping name** Not regulated as dangerous goods.  
**14.3. Transport hazard class(es)**  
**Class** Not assigned.  
**Subsidiary risk** -  
**14.4. Packing group** -  
**14.5. Environmental hazards**  
**Marine pollutant** No.  
**EmS** Not assigned.  
**14.6. Special precautions for user** Not assigned.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

Aluminium (CAS 7429-90-5)

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

**Authorisations**

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

**Restrictions on use**

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use, as amended - Conditions of restriction given for the associated entry number should be considered**

Not listed.

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

**Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex I, as amended**

Not listed.

**Regulation 2019/1148 on Marketing and Use of Explosive Precursors, Annex II, as amended**

Aluminium (CAS 7429-90-5)

ALUMINIUM, POWDERS

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Please see [https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosives-precursors/docs/list\\_of\\_competent\\_authorities\\_and\\_national\\_contact\\_points\\_en.pdf](https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/crisis-and-terrorism/explosives/explosives-precursors/docs/list_of_competent_authorities_and_national_contact_points_en.pdf).

**Other EU regulations**

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

ANNEX 1, PART 1 Categories of dangerous substances  
Hazard categories in accordance with Regulation (EC) No 1272/2008  
- E1 Hazardous to the Aquatic Environment Acute  
- E1 Hazardous to the Aquatic Environment Chronic

**Other regulations**

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended.

**National regulations**

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**List of abbreviations**

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.  
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.  
CAS: Chemical Abstract Service.  
CEN: European Committee for Standardization.  
IATA: International Air Transport Association.  
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.  
IMDG: International Maritime Dangerous Goods.  
MARPOL: International Convention for the Prevention of Pollution from Ships.  
PBT: Persistent, bioaccumulative and toxic.  
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.  
STEL: Short term exposure limit.  
TWA: Time Weighted Average.  
vPvB: Very persistent and very bioaccumulative.

**References**

Not available.

**Information on evaluation method leading to the classification of mixture**

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

**Full text of any statements,  
which are not written out in  
full under sections 2 to 15**

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Revision information**

Product and Company Identification: Product and Company Identification

Composition / Information on Ingredients: Ingredients

Transport Information: Material Transportation Information

GHS: Classification

**Training information**

Follow training instructions when handling this material.

**Disclaimer**

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To avoid any misunderstandings or incorrect assumptions by the receiver of the safety information, it should be made clear that the supplied information is not in the form of a Safety Data Sheet (SDS), but is actually a voluntary Product Information Sheet closely following the guidelines of the Safety Data Sheet – COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 (REACH/SDS).