



CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

MATERION

Product name: Aluminum Scandium Products

Issue date: 08-19-2019

Version #: 01

SDS No: 340

SECTION 1 Chemical product and company identification

Chinese name of chemical	Not available.	
English name of chemical	Aluminum Scandium Products	
Manufacturer/Supplier	Materion Advanced Materials Group	
Address	42 Mt. Ebo Road South Brewster, NY 10509 United States	
Contact person	Not available.	
Telephone	1+845.279.0900	
e-mail	Not available.	
Emergency telephone number	Chemtrec	1+703.527.3887
Issue date	08-19-2019	
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SECTION 2 Hazards identification

Emergency overview	Not available.	
Hazard categories	Not classified.	
Label elements		
Pictograms	None.	
Signal word	None.	
Hazard statement	None.	
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.	
Physical and chemical hazards	The product is stable and non-reactive under normal conditions of use, storage and transport. No unusual fire or explosion hazards noted.	
Health hazards	Expected to be a low ingestion hazard. Direct contact with eyes may cause temporary irritation.	
Environmental hazards	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.	
Supplemental information	100% of the mixture consists of component(s) of unknown acute oral toxicity. 100% of the mixture consists of component(s) of unknown acute dermal toxicity. 100% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 100% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.	

SECTION 3 Composition/information on ingredients

Substance/mixture	Mixture		
Chemical name	Concentration (%)	CAS Number	
Aluminum	75 - 99.9	7429-90-5	
Scandium	0.1 - 25	7440-20-2	

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	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms and health effects	Direct contact with eyes may cause temporary irritation.
Personal protection for first-aid responders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Notes to physician	Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media	Powder. Dry sand.
Extinguishing media to avoid	Do not use water jet as an extinguisher, as this will spread the fire. Carbon dioxide (CO ₂).
Specific hazards	During fire, gases hazardous to health may be formed.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
Protection of fire-fighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
General fire hazards	No unusual fire or explosion hazards noted.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Keep unnecessary personnel away.
For emergency responders	Keep unnecessary personnel away.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Clean-up methods and materials and containment measures	Stop the flow of material, if this is without risk. Following product recovery, flush area with water.
Prevention of secondary hazards	Not available.

SECTION 7 Handling and storage

Handling	Observe good industrial hygiene practices.
Storage	Store in original tightly closed container.

SECTION 8 Exposure controls/personal protection**Exposure limits**

China OELs. Occupational Exposure Limits for Hazardous Agents in the Workplace, Chemical Hazardous Agents (GBZ 2.1-2007)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	PC-TWA	3 mg/m ³	Total dust.
Scandium (CAS 7440-20-2)	PC-TWA	2.5 mg/m ³	Total dust.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Monitoring methods	Follow standard monitoring procedures.
Engineering measures	Good general ventilation (typically 10 air changes per hour) 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.
Personal protective equipment	
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Hand protection	Wear appropriate chemical resistant gloves.
Eye protection	Wear safety glasses with side shields (or goggles).

Skin and body protection	Wear suitable protective clothing.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

SECTION 9 Physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid.
Color	Not available.
Odor	Not available.
pH	Not available.
Melting point/freezing point	1220 °F (660 °C) estimated
Boiling point, initial boiling point, and boiling range	4220.6 °F (2327 °C) estimated
Flash point	Not available.
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.
Density	2.70 g/cm ³ estimated
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Flammability (solid, gas)	Not available.
Other data	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	2.7 estimated

SECTION 10 Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
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	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11 Toxicological information

Acute toxicity	Not known.
Routes of exposure	Not available.
Symptoms	Direct contact with eyes may cause temporary irritation.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitizer	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not available.
Toxic to reproduction	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity following single exposure	Not classified.
Specific target organ toxicity following repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Not available.

SECTION 12 Ecological information

Ecotoxicity	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.
Persistence and degradability	
Bioaccumulation	No data available.
Mobility in soil	No data available for this product.
Other hazardous 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

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.
Local disposal regulations	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

SECTION 14 Transport information

CNDG	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.

SECTION 15 Regulatory information

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Classification of occupational disease hazards

Aluminum (CAS 7429-90-5)

Scandium (CAS 7440-20-2)

Regulations on the Control over Safety of Dangerous Chemicals

Catalog of Hazardous Chemicals

ALUMINIUM POWDER (CAS 7429-90-5)

Provision on the Environmental Administration of New Chemical Substances**China Inventory of Existing Chemical Substances**

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

*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).

Other regulations

This safety data sheet conforms to the following laws, regulations and standards:
 Regulations on the Control over Safety of Dangerous Chemicals
 Regulations on Labor Protection in Workplaces Where Toxic Products Are Used
 Measures for the Safe Use of Chemicals in Workplaces
 Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)
 General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009)
 Packing Symbol of Dangerous Goods(GB190-2009)
 Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)

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**References**

EPA: AQUIRE database
 GB6944-2012: Classification and Code of Dangerous Goods.
 GB12268-2012: List of Dangerous Goods.
 NLM: Hazardous Substances Data Base
 US. IARC Monographs on Occupational Exposures to Chemical Agents

Disclaimer

Materion Advanced Materials Group cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

Revision information

Product and Company Identification: Product Review
 Composition / Information on Ingredients: Ingredients
 Transport Information: Material Transportation Information