



PRODUCT INFORMATION SHEET

MATERION

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

1.1. Product identifier

Name of the substance	Aluminum Targets
Identification number	013-002-00-1 (Index number)
Registration number	-
Document number	G12
Synonyms	None.
Issue date	23-July-2021
Version number	01

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

Identified uses	Manufacture of computer, electronic and optical products, electrical equipment Scientific research and development 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 product information sheet

Supplier

Company name	Materion Advanced 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.

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

Hazard summary	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 or powder) and/or chemical compounds, a potential health hazard could exist and risk management measures must be taken to minimize risk.
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2.2. Label elements

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

Contains:	Aluminum Targets
Hazard pictograms	None.
Signal word	None.
Hazard statements	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 statements

Prevention	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302 + P350

If on skin: Wash with plenty of water.

P308 + P313

If exposed or concerned: Get medical advice/attention.

P333 + P313

If skin irritation or rash occurs: Get medical advice/attention.

P363

Wash contaminated clothing before reuse.

Storage

P405

Store locked up.

Disposal

P501

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

Supplemental label information

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

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Aluminum Targets	100	7429-90-5 231-072-3	-	013-002-00-1	
Classification: -					T

SECTION 4: First aid measures

General information

If exposed or concerned: get medical attention/advice. 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.

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

Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed

Under normal conditions of intended use, this material does not pose a risk to health.

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

Provide general supportive measures and 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. Carbon dioxide (CO2).

5.2. Special hazards arising from the substance or mixture

Not available.

5.3. Advice for firefighters

Special protective equipment for firefighters

Wear suitable protective equipment.

Special firefighting procedures

No unusual fire or explosion hazards noted.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel As supplied, this product poses no special release issues.

For emergency responders As supplied, this product poses no special release issues. Keep unnecessary personnel away.

6.2. Environmental precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Collect spillage. Prevent product from entering drains. Prevent entry into waterways, sewer, basements or confined areas.

6.4. Reference to other sections

For personal protection, see section 8 of the PIS. For waste disposal, see section 13 of the PIS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	MAK	5 mg/m ³	Respirable fraction.
		10 mg/m ³	Inhalable fraction.
	STEL	20 mg/m ³	Inhalable fraction.
		10 mg/m ³	Respirable fraction.

Belgium. Exposure Limit Values

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.

Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	2 mg/m ³	
		10 mg/m ³	Dust.
		1,5 mg/m ³	Respirable fraction.

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	MAC	4 mg/m ³	Respirable dust.
		10 mg/m ³	Total dust.

Czech Republic. OELs. Government Decree 361

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	10 mg/m ³	Dust.

Denmark. Exposure Limit Values

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TLV	5 mg/m ³	Dust and fume.

Denmark. Exposure Limit Values

Material	Type	Value	Form
		5 mg/m ³	Fume.
		2 mg/m ³	Respirable dust and/or fume.

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	4 mg/m ³	Fine dust, respiratory fraction
		10 mg/m ³	Total dust.

Finland. Workplace Exposure Limits

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	1,5 mg/m ³	Welding fume.

France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	VME	5 mg/m ³	Dust.
Regulatory status: Indicative limit (VL)		5 mg/m ³	Welding fume.
Regulatory status: Indicative limit (VL)		10 mg/m ³	
Regulatory status: Indicative limit (VL)			

Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	4 mg/m ³	Inhalable dust.
		1,5 mg/m ³	Respirable dust.

Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	AGW	10 mg/m ³	Inhalable fraction.
		1,25 mg/m ³	Respirable fraction.

Greece. OELs (Decree No. 90/1999, as amended)

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	5 mg/m ³	Inhalable
		10 mg/m ³	Welding fume.
		10 mg/m ³	Respirable.
		10 mg/m ³	Pyrophoric powder.

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	6 mg/m ³	Respirable.

Iceland. OELs. Regulation 154/1999 on occupational exposure limits

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	STEL	10 mg/m ³	Dust.
	TWA	5 mg/m ³	Dust.

Ireland. Occupational Exposure Limits

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	1 ppm	Respirable dust.

Italy. Occupational Exposure Limits

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.

Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	2 mg/m ³	

Lithuania. OELs. Limit Values for Chemical Substances, General Requirements

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	5 mg/m ³	Inhalable fraction.
		2 mg/m ³	Respirable fraction.

Norway. Administrative Norms for Contaminants in the Workplace

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TLV	5 mg/m ³	Welding fume.
		5 mg/m ³	Pyrophoric powder.

Poland. Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	2,5 mg/m ³	Inhalable fraction.
		1,2 mg/m ³	Respirable fraction.

Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	1 mg/m ³	Respirable fraction.

Romania. OELs. Protection of workers from exposure to chemical agents at the workplace

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	STEL	3 mg/m ³	Fume.
		10 mg/m ³	Dust.
	TWA	3 mg/m ³	Dust.
		1 mg/m ³	Fume.

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	4 mg/m ³	Inhalable fraction.
		1,5 mg/m ³	Respirable fraction.

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	10 mg/m ³	Inhalable fraction.
		1,25 mg/m ³	Respirable fraction.

Spain. Occupational Exposure Limits

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	5 mg/m ³	Welding fume.

Spain. Occupational Exposure Limits

Material	Type	Value	Form
		10 mg/m ³	Dust.

Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	5 mg/m ³	Total dust.
		2 mg/m ³	Respirable dust.

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	3 mg/m ³	Respirable fraction.

UK. EH40 Workplace Exposure Limits (WELs)

Material	Type	Value	Form
Aluminum Targets (CAS 7429-90-5)	TWA	4 mg/m ³	Respirable dust.
		10 mg/m ³	Inhalable dust.

Biological limit values**Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)**

Material	Value	Determinant	Specimen	Sampling Time
Aluminum Targets (CAS 7429-90-5)	200 mg/l	Aluminium	Urine	*

* - For sampling details, please see the source document.

Germany. TRGS 903, BAT List (Biological Limit Values)

Material	Value	Determinant	Specimen	Sampling Time
Aluminum Targets (CAS 7429-90-5)	50 µg/g	Aluminium	Urine	*

* - For sampling details, please see the source document.

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Material	Value	Determinant	Specimen	Sampling Time
Aluminum Targets (CAS 7429-90-5)	60 µg/g	Aluminium	Creatinine in urine	*

* - For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)

Material	Value	Determinant	Specimen	Sampling Time
Aluminum Targets (CAS 7429-90-5)	60 µg/g	Aluminium	Creatinine in urine	*

* - For sampling details, please see the source document.

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

Appropriate engineering controls 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.

Individual protection measures, such as personal protective equipment

General information Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear approved safety glasses, goggles, face shield and/or welder's helmet when risk of eye injury is present, particularly during operations that generate dust, mist or fume.

Skin protection

- Hand protection	Wear gloves to prevent metal cuts and skin abrasions during handling.
- Other	Wear suitable protective equipment.
Respiratory protection	In case of inadequate ventilation, use respiratory protection.
Thermal hazards	Not applicable.

Hygiene measures 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.

Environmental exposure controls Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Solid.

Form Solid.

Colour Silver

Odour None.

Odour threshold Not applicable.

pH Not applicable.

Melting point/freezing point 660 °C (1220 °F)

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 - lower (%) temperature Not applicable.

Flammability limit - upper (%) Not applicable.

Flammability limit - upper (%) temperature Not applicable.

Explosive limit - lower (%) Not applicable.

Explosive limit - lower (%) temperature Not applicable.

Explosive limit – upper (%) Not applicable.

Explosive limit - upper (%) temperature Not applicable.

Vapour pressure Not applicable.

Vapour 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.

Explosive properties Not explosive.

Oxidising properties Not oxidising.

9.2. Other information

Density 2,70 g/cm³ estimated

Heat of combustion (NFPA 30B)	0 kJ/g
Molecular formula	Al
Molecular weight	26,98 g/mol
Specific gravity	2,7

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	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Not relevant, due to the form of the product.
Ingestion	Not available.

Symptoms None known.

11.1. Information on toxicological effects

Acute toxicity	None known.
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 sensitizer.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Aluminum Targets (CAS 7429-90-5)

Carcinogenic, Category 1A

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Mixture versus substance information	No information available.
Other information	Not available.

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 Targets (CAS 7429-90-5)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)
		0,16 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

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	Not a PBT or vPvB substance or mixture.
12.6. 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. - 14.6.: Not regulated as dangerous goods.

RID

14.1. - 14.6.: Not regulated as dangerous goods.

ADN

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

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

Aluminum Targets (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

Aluminum Targets (CAS 7429-90-5)

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.

Other EU regulations

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

Aluminum Targets (CAS 7429-90-5)

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.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

Not applicable.

Training information

Follow training instructions when handling this material.

Further information

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

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).