



SAFETY DATA SHEET

MATERION

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

1.1. Product identifier

Name of the substance Aluminum sulfide (Al₂S₃) pieces
Identification number 215-109-0 (EC number)
Synonyms Aluminum sulfide (Al₂S₃) * Dialuminium trisulphide * Dialuminium trisulfide
Document number MKE-0316
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1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Not available.
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name Materion Advanced Chemicals Inc.
Address 407 N. 13th Street
1316 W. St. Paul Avenue
Milwaukee, WI 53233
United States
Division Milwaukee
Telephone 414.212.0257
e-mail advancedmaterials@materion.com
Contact person Noreen Atkinson

1.4. Emergency telephone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance 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

Physical hazards

Substances and mixtures which, in contact with water, emit flammable gases Category 2 H261 - In contact with water releases flammable gases.

Hazard summary In contact with water releases flammable gases.

2.2. Label elements

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

Contains: Aluminum sulfide

Hazard pictograms



Signal word Danger

Hazard statements

H261 In contact with water releases flammable gases.

Precautionary statements

Prevention

P223 Do not allow contact with water.
P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire.
P231 + P232 Handle under inert gas. Protect from moisture.
P280 Wear protective gloves/eye protection/face protection.

Response

P335 + P334
P370 + P378

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
In case of fire: Use appropriate media to extinguish.

Storage

P402 + P404

Store in a dry place. Store in a closed container.

Disposal

P501

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

Supplemental label information

None.

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 sulfide	100	1302-81-4 215-109-0	-	-	
Classification:	Water-React. 2;H261				

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

SECTION 4: First aid measures**General information**

Not available.

4.1. Description of first aid measures**Inhalation**

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Get medical attention if irritation develops and persists.

Eye contact

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

Ingestion

Get medical advice/attention if you feel unwell.

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

Not available.

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

Provide general supportive measures and treat symptomatically. Treat symptomatically.

SECTION 5: Firefighting measures**General fire hazards**

Not available.

5.1. Extinguishing media**Suitable extinguishing media**

Not available.

Unsuitable extinguishing media

Water.

5.2. Special hazards arising from the substance or mixture

In contact with water releases flammable gases.

5.3. Advice for firefighters**Special protective equipment for firefighters**

Wear suitable protective equipment.

Special firefighting procedures

In the event of fire, cool tanks with water spray. Do not get water inside container.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Local authorities should be advised if significant spillages cannot be contained. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate personal protective equipment. Ensure adequate ventilation.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

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

6.3. Methods and material for containment and cleaning up Stop the flow of material, if this is without risk. Do not get water on spilled substance or inside containers. Following product recovery, flush area with water.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. Avoid prolonged exposure.

7.2. Conditions for safe storage, including any incompatibilities Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a dry place. Never allow product to get in contact with water during storage.

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

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

Material	Type	Value
Aluminum sulfide (CAS 1302-81-4)	TWA	2 mg/m ³

Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)

Material	Type	Value
Aluminum sulfide (CAS 1302-81-4)	TWA	2 mg/m ³

Finland. Workplace Exposure Limits

Material	Type	Value
Aluminum sulfide (CAS 1302-81-4)	TWA	2 mg/m ³

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

Material	Type	Value
Aluminum sulfide (CAS 1302-81-4)	TWA	2 mg/m ³

Italy. Occupational Exposure Limits

Material	Type	Value	Form
Aluminum sulfide (CAS 1302-81-4)	TWA	1 mg/m ³	Respirable fraction.

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

Material	Type	Value
Aluminum sulfide (CAS 1302-81-4)	TWA	1 mg/m ³

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

Material	Type	Value	Form
Aluminum sulfide (CAS 1302-81-4)	TWA	1 mg/m ³	Total dust.

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

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 Not available.

Eye/face protection Wear eye/face protection.

Skin protection

- **Hand protection** Not normally needed.

- **Other** Wear suitable protective clothing. Wear protective gloves. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Thermal hazards Not available.

Hygiene measures Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practices.

Environmental exposure controls Not available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Solid.

Form Solid.

Colour Not available.

Odour Not available.

Odour threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure Not available.

Vapour density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

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

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Explosive properties Not available.

Oxidising properties Not available.

9.2. Other information

Molecular formula Al₂S₃

SECTION 10: Stability and reactivity

10.1. Reactivity Not available.

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 Moisture. Contact with water liberates flammable gas.

10.5. Incompatible materials None known.

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 Due to lack of data the classification is not possible.

Skin contact Due to lack of data the classification is not possible.

Eye contact Due to lack of data the classification is not possible.

Ingestion Due to lack of data the classification is not possible.

Symptoms Not available.

11.1. Information on toxicological effects

Acute toxicity No data available.

Skin corrosion/irritation Due to lack of data the classification is not possible.

Serious eye damage/eye irritation Due to lack of data the classification is not possible.

Respiratory sensitisation Due to lack of data the classification is not possible.

Skin sensitisation Due to lack of data the classification is not possible.

Germ cell mutagenicity Due to lack of data the classification is not possible.

Carcinogenicity Due to lack of data the classification is not possible.

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

Not listed.

Reproductive toxicity Due to lack of data the classification is not possible.

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

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

Aspiration hazard Due to lack of data the classification is not possible.

Mixture versus substance information Not available.

Other information Not available.

SECTION 12: Ecological information

12.1. Toxicity No toxicity data noted for the ingredient(s).

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

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log K_{ow}) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil Not available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Not available.

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	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
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. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN3134
14.2. UN proper shipping name	Water-reactive solid, toxic, n.o.s.
14.3. Transport hazard class(es)	
Class	4.3
Subsidiary risk	6.1(PGI, II)
Label(s)	4.3, 6.1
Hazard No. (ADR)	Not available.
Tunnel restriction code	Not available.
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

RID

14.1. UN number	UN3134
14.2. UN proper shipping name	Water-reactive solid, toxic, n.o.s.
14.3. Transport hazard class(es)	
Class	4.3
Subsidiary risk	-
Label(s)	4.3+6.1
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

ADN

14.1. UN number	UN3134
14.2. UN proper shipping name	Water-reactive solid, toxic, n.o.s.
14.3. Transport hazard class(es)	
Class	4.3
Subsidiary risk	6.1(PGI, II)
Label(s)	4.3, 6.1
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

IATA

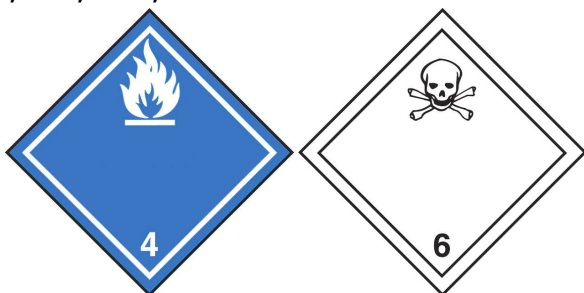
14.1. UN number	UN3134
14.2. UN proper shipping name	Water-reactive solid, toxic, n.o.s.
14.3. Transport hazard class(es)	
Class	4.3

Subsidiary risk	6.1(PGI, II)
14.4. Packing group	II
14.5. Environmental hazards	No.
ERG Code	4PW
14.6. Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN3134
14.2. UN proper shipping name	WATER-REACTIVE SOLID, TOXIC, N.O.S.
14.3. Transport hazard class(es)	
Class	4.3
Subsidiary risk	6.1(PGI, II)
14.4. Packing group	II
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-G, S-N
14.6. Special precautions for user	Not available.

ADN; ADR; IATA; IMDG



RID



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 (EC) No. 850/2004 On persistent organic pollutants, Annex I 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

Not listed.

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

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.

Other EU regulations

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

Not listed.

Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations

Not available.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

Information on evaluation method leading to the classification of mixture

Not available.

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