



SAFETY DATA SHEET

MATERION

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

1.1. Product identifier

Name of the substance Ammonium Molybdate Powder
Identification number 234-722-4 (EC number)
Synonyms None.
Document number 1AH
Materion Code 1AH
Issue date 02-October-2017
Version number 03
Revision date 16-March-2018
Supersedes date 02-October-2017

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

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

Health hazards
Acute toxicity, oral Category 4 H302 - Harmful if swallowed.

Hazard summary Not available.

2.2. Label elements

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

Contains: Ammonium Molybdate Powder
Hazard pictograms None.
Signal word Warning
Hazard statements
H302 Harmful if swallowed.

Precautionary statements

Prevention
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

Response

P301 + P312 IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
P330 Rinse mouth.

Storage Not available.

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
Ammonium Molybdate Powder	100	12027-67-7 234-722-4	-	-	
Classification:	Acute Tox. 4;H302				

SECTION 4: First aid measures**General information** Not available.**4.1. Description of first aid measures****Inhalation** Not available.**Skin contact** Not available.**Eye contact** Not available.**Ingestion** Not available.**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** Not available.**SECTION 5: Firefighting measures****General fire hazards** Not available.**5.1. Extinguishing media****Suitable extinguishing media** Not available.**Unsuitable extinguishing media** Not available.**5.2. Special hazards arising from the substance or mixture** Not available.**5.3. Advice for firefighters****Special protective equipment for firefighters** Not available.**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****For non-emergency personnel** Not available.**For emergency responders** Not available.**6.2. Environmental precautions** Not available.**6.3. Methods and material for containment and cleaning up** Not available.**6.4. Reference to other sections** Not available.**SECTION 7: Handling and storage****7.1. Precautions for safe handling** Not available.

7.2. Conditions for safe storage, including any incompatibilities Not available.

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
Ammonium Molybdate Powder (CAS 12027-67-7)	MAK	5 mg/m ³	Inhalable fraction.
	STEL	10 mg/m ³	Inhalable fraction.

Belgium. Exposure Limit Values.

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	0,5 mg/m ³

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

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	MAC	5 mg/m ³
	STEL	10 mg/m ³

Czech Republic. OELs. Government Decree 361

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	Ceiling	25 mg/m ³
	TWA	5 mg/m ³

Denmark. Exposure Limit Values

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	TLV	5 mg/m ³

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

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	5 mg/m ³

Finland. Workplace Exposure Limits

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	0,5 mg/m ³

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

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	VLE	10 mg/m ³
	VME	5 mg/m ³

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

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	5 mg/m ³

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	STEL	20 mg/m ³
	TWA	5 mg/m ³

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

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	5 mg/m ³

Ireland. Occupational Exposure Limits

Material	Type	Value	Form
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	0,5 mg/m ³	Respirable fraction.

Italy. Occupational Exposure Limits

Material	Type	Value	Form
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	0,5 mg/m ³	Respirable fraction.

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

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	5 mg/m ³

Norway. Administrative Norms for Contaminants in the Workplace

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	TLV	5 mg/m ³

Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	STEL	10 mg/m ³
	TWA	4 mg/m ³

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

Material	Type	Value	Form
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	0,5 mg/m ³	Respirable fraction.

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

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	STEL	65 mg/m ³
	TWA	2 mg/m ³

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

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	5 mg/m ³

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
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	5 mg/m ³	Inhalable fraction.

Spain. Occupational Exposure Limits

Material	Type	Value	Form
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	0,5 mg/m ³	Respirable fraction.

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

Material	Type	Value	Form
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	5 mg/m ³	Total dust.

Switzerland. SUVA Grenzwerte am Arbeitsplatz

Material	Type	Value	Form
Ammonium Molybdate Powder (CAS 12027-67-7)	TWA	5 mg/m ³	Inhalable dust.

UK. EH40 Workplace Exposure Limits (WELs)

Material	Type	Value
Ammonium Molybdate Powder (CAS 12027-67-7)	STEL	10 mg/m ³
	TWA	5 mg/m ³
Biological limit values	No biological exposure limits noted for the ingredient(s).	
Recommended monitoring procedures	Not available.	
Derived no effect levels (DNELs)	Not available.	
Predicted no effect concentrations (PNECs)	Not available.	
8.2. Exposure controls		
Appropriate engineering controls	Not available.	
Individual protection measures, such as personal protective equipment		
General information	Not available.	
Eye/face protection	Not available.	
Skin protection		
- Hand protection	Not available.	
- Other	Not available.	
Respiratory protection	Not available.	
Thermal hazards	Not available.	
Hygiene measures	Not available.	
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	Powder.
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	H24-Mo7-N6-O24
Molecular weight	1163,89 g/mol

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Not available.
10.3. Possibility of hazardous reactions	Not available.
10.4. Conditions to avoid	Not available.
10.5. Incompatible materials	Not available.
10.6. Hazardous decomposition products	Not available.

SECTION 11: Toxicological information

General information Not available.

Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms Not available.

11.1. Information on toxicological effects

Acute toxicity

Product	Species	Test results
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Ammonium Molybdate Powder (CAS 12027-67-7)

Acute

Oral

LD50	Rat	333 mg/kg
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Skin corrosion/irritation Not available.

Serious eye damage/eye irritation Not available.

Respiratory sensitisation Not available.

Skin sensitisation Not available.

Germ cell mutagenicity Not available.

Carcinogenicity

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

Not listed.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

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 Not available.

12.3. Bioaccumulative potential	Not available.
Partition coefficient n-octanol/water (log Kow)	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.

12.7. Additional information

Estonia Dangerous substances in groundwater Data

Ammonium Molybdate Powder (CAS 12027-67-7)	Molybdenum (Mo) 5 UG/L
	Molybdenum (Mo) 70 UG/L

Estonia Dangerous substances in soil Data

Ammonium Molybdate Powder (CAS 12027-67-7)	Molybdenum (Mo) 10 mg/kg
	Molybdenum (Mo) 20 mg/kg
	Molybdenum (Mo) 200 mg/kg

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Not available.
Contaminated packaging	Not available.
EU waste code	Not available.

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 (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

Ammonium Molybdate Powder (CAS 12027-67-7)

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.

National regulations Not available.

15.2. Chemical safety assessment Not available.

SECTION 16: Other information

List of abbreviations Not available.

Information on evaluation method leading to the classification of mixture Not available.