



**Safety Data Sheet according to Regulation (EC) No.  
1907/2006 (REACH)**

Version: 1  
Replaces version:

Revision date: 05.12.2019  
from:

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

**1.1. Product identifier**

**m4p™ AISi7Mg**

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

**Relevant identified uses:** metal powder for additive manufacturing  
**Uses advised against:** no information available

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

**Supplier**

m4p material solutions GmbH  
Mittelweg 13  
D-39130 Magdeburg

**Telephone** +49 (0)177 8036000  
**Telefax:** +49 (0)391 7214941

**Information contact**

Herr Dr. Andreas Pelz

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**E-mail (competent person)** a.pelz@metals4printing.com  
**Website** www.metals4printing.com

**1.4. Emergency telephone number**

Euro Emergency number

**Telephone** 112

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**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

Regulation (EC) No 1272/2008:

Identification is not obligatory. Please observe the information on the safety data sheet at all times.

**2.2. Label elements**

**Classification according to Regulation (EC) No 1272/2008 [CLP]**

**Hazard pictograms**

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**Signal word:**

-

**Hazard statements:**

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**Precautionary statements:**

-

**2.3. Other hazards**

no information available

## SECTION 3: Composition / information on ingredients

### 3.1. Substances

not applicable

### 3.2. Mixtures

Mixture related information

#### Composition/information on ingredients

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008 (CLP):
Aluminum	231-072-3	7429-90-5	013-001-00-1	01-2119529243-45-XXXX	Base	Flam. Sol. 1/2, H228; Water-react. 2/3, H261
Silicon	231-130-8	7440-21-3			6,50-7,50%	-
Magnesium	231-104-6	7439-95-4			0,45-0,70%	Flam. Sol. 1/2, H228; Self-heat. 1, H251; Water-react. 2/3, H261

(Full text of H- and EUH-statements: see section 16.)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General information:** In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**In case of inhalation:** Provide fresh air.  
In case of respiratory tract irritation, consult a physician.

**Following skin contact:** No special measures are necessary.  
In case of skin irritation, consult a physician.

**After eye contact:** No special measures are necessary.  
In case of eye irritation consult an ophthalmologist.

**After ingestion:** Rinse mouth immediately and drink plenty of water.  
Seek medical attention if problems persist.

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

No known symptoms to date.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** D -powder  
Sand  
**Unsuitable extinguishing media** Carbon dioxide (CO<sub>2</sub>)  
Foam  
Water

## 5.2. Special hazards arising from the substance or mixture

Contact with water liberates extremely flammable gases.

## 5.3. Advice for firefighters

### General information

Co-ordinate fire-fighting measures to the fire surroundings.

### Special protective equipment for fire-fighters:

In case of fire: Wear self-contained breathing apparatus.

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## SECTION 6: Accidental release measures

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

Wear personal protection equipment. Remove all sources of ignition. Remove persons to safety. Provide adequate ventilation.

### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

### 6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Treat the recovered material as prescribed in the section on waste disposal. Avoid generation of dust. Clear contaminated areas thoroughly. Avoid contact with water. Do not rinse down with water.

### 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advices on safe handling

Provide adequate ventilation as well as local exhaustion at critical locations. Do not breathe dust. Avoid generation of dust. Use only in well-ventilated areas. Do not breathe gas/fumes/vapour/spray. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Avoid contact with skin and eyes.

#### Precautions against fire and explosion:

Take precautionary measures against static discharges.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Keep away from sources of ignition

#### Hints on joint storage

Do not store together with: Acids, Oxidizing agents.

Keep away from food, drink and animal feedingstuffs.

### 7.3. Specific end use(s)

none

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### occupational exposure limit value

Substance:	CAS-No.:	Source:	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m³]	Limitation of exposure peaks:	Remark:

#### Substance with a common (EC) occupational exposure limit value.

Substance:	CAS-No.:	Source:	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m³]	Limitation of exposure peaks:	Remark:

#### DNEL-/PNEC-values

##### DNEL value

Substance:	CAS-No.:	DNEL/DMEL
Aluminum	7429-90-5	worker inhalative long-term, systemic 3,72 mg/m³ worker inhalative long-term, local 3,72 mg/m³ population oral long-term, systemic 7,9 mg/kg bw/day

##### PNEC Value

Substance:	CAS-No.:	PNEC

#### Additional information

none

### 8.2. Exposure controls

#### Occupational exposure controls:

Provide adequate ventilation as well as local exhaust at critical locations. Technical measures and the application of suitable work processes have priority over personal protection equipment.

#### General protection and hygiene measures:

When using do not eat, drink, smoke, sniff.  
 Wash hands before breaks and after work.  
 Apply skin care products after work.  
 Wash contaminated clothing prior to re-use.

#### Personal protection equipment

Only wear fitting, comfortable and clean protective clothing.

#### Respiratory protection

Respiratory protection necessary at: In the case of the formation of dust.  
 (PartikelfilterP3)

#### Hand protection

Tested protective gloves are to be worn: DIN-/EN-Norms: EN ISO 374

#### Eye/face protection

Safety glasses.

#### Body protection:

Wear suitable protective clothing.

#### Environmental exposure controls

refer to chapter 7. No further action is necessary.

#### Consumer exposure controls

refer to chapter 7. No further action is necessary.

#### Exposure Scenario:

none

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## SECTION 9: Physical and chemical properties

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

#### Appearance

**Physical state:** solid: powder  
**Colour:** grey  
**Odour:** odourless  
**Odour threshold:** not applicable

#### Safety relevant basis data

	parameter	Value	unit	Remark
<b>pH:</b>		not applicable		
<b>Melting point/freezing point:</b>		550-650°C		
<b>Initial boiling point and boiling range:</b>		No data available		
<b>Flash point:</b>		No data available		
<b>Flammability (solid, gas):</b>		No data available		
<b>Explosivity:</b>		Dust can form explosive mixtures in the air		
<b>Relative density:</b>		ca. 2,7g/cm <sup>3</sup>		
<b>Water solubility (g/L):</b>		practically insoluble		
<b>Viscosity:</b>		not applicable		

### 9.2. Other information

none

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

The substance is chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

No data available

### 10.4. Conditions to avoid

moisture.

### 10.5. Incompatible materials

Alkalis (alkalis), Acids, Oxidising agents, Moisture

## 10.6. Hazardous decomposition products

No data available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

There are no data available on the preparation/mixture itself.

**M-factor:** not applicable

**Acute toxicity (dermal):** not applicable

**Acute toxicity (oral):** not applicable

**Acute toxicity (inhalative):** not applicable

#### Acute toxicity

Substance:	CAS-No.:	Toxicological information
Aluminum	7429-90-5	LD50 oral (rat) > 2000 mg/kg LC50 inhalation (Rat) > 888 mg/m <sup>3</sup> LC50 shellfish (48) 0

#### Skin corrosion/irritation:

No data available

#### Serious eye damage/irritation:

No data available

#### Respiratory or skin sensitisation:

No information available.

#### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity:

No information available.

Germ cell mutagenicity:

No information available.

Reproductive toxicity:

No information available.

#### STOT-single exposure:

No information available.

#### STOT-repeated exposure:

No information available.

#### Aspiration hazard:

No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

There are no data available on the mixture itself.

#### Ecotoxicity

Substance:	CAS-No.:	Ecotoxicity
Aluminum	7429-90-5	LC50 fish (96h) mg/l

### 12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential

No information available.

### 12.4. Mobility in soil

No information available.

### 12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

### 12.6. Other adverse effects

none

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Appropriate disposal/Product:

Waste disposal according to EC Directives 75/442/EEC and 91/689/EEC on waste and hazardous waste in their latest versions. Dispose of waste according to applicable legislation.

#### Appropriate disposal / Package

Non-contaminated packages may be recycled.

Handle contaminated packages in the same way as the substance itself.

#### List of proposed waste codes / waste designations according to EWC / AVV

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

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## SECTION 14: Transport information

### 14.1. UN number

UN No.: no dangerous goods in the sense of transport regulations

### 14.2. UN proper shipping name

#### Land transport (ADR/RID)

Not applicable

#### Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)

Not applicable

### 14.3. Transport hazard class(es)

Hazard label(s) / Label: - Classification code: / Classification Code: -

### 14.4. Packing group

Packing group/ Packing Group: -

### 14.5. Environmental hazards

ADR/RID / IMDG / ICAO-TI / IATA-DGR: Yes  No

Marine pollutant:

#### 14.6. Special precautions for user

Land transport (ADR/RID)

transport category: -

tunnel restriction code: -

Special provisions: -

Limited quantity (LQ): -

Sea transport (IMDG)

EmS-No: -

Special provisions: -

Limited quantity (LQ): -

#### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remark

none

### SECTION 15: Regulatory information

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

##### EU legislation

Contains no substance subject to the restrictions of Annex XVII of the REACH Regulation.

Contains no REACH candidate substance.

Contains no substance listed in REACH Annex XIV.

##### National regulations

Observe in addition any national regulations!

#### 15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### Relevant H- and EUH-phrases (Number and full text):

##### Hazard statements

-

#### Training advice

none

#### Recommended restrictions of use:

refer to chapter 1.

#### Further remarks:

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.



**Documentation of changes:**

none

**Key literature references and sources for data**

ECHA - European Chemical Agency

**Abbreviations and acronyms**

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

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