

# PRODUCT INFORMATION SHEET

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

### 1.1. Product identifier

<b>Trade name or designation of the mixture</b>	Aluminum Silicon Alloy
<b>Registration number</b>	-
<b>Document number</b>	L64
<b>Synonyms</b>	AMC4632, AMC4632E, AMC4631, AMC4630
<b>Issue date</b>	27-August-2019
<b>Version number</b>	02
<b>Revision date</b>	04-May-2021
<b>Supersedes date</b>	27-August-2019

### 1.3. Details of the supplier of the product information sheet

#### Supplier

**Company name** Materion Aerospace Metals Composites  
**Address** 1 R A E Road, Farnborough  
Hampshire GU14 6XE  
UK

#### Division

**Telephone** +1.216.383.4019

**e-mail** ehs@materion.com

**Contact person** Theodore Knudson

**1.4. Emergency telephone number** +1.216.383.4019

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

**Identified uses** Industrial uses: Uses of substances as such or in preparations at industrial sites  
Manufacture of basic metals, including alloys  
Manufacture of computer, electronic and optical products, electrical equipment  
General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment  
Electricity, steam, gas water supply and sewage treatment  
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 safety data sheet

#### Supplier

**Company name** Materion Aerospace Metals Composites  
**Address** 1 R A E Road, Farnborough  
Hampshire GU14 6XE  
UK

#### Division

**Telephone** +1.216.383.4019

**e-mail** ehs@materion.com

**Contact person** Theodore Knudson

**1.4. Emergency telephone number** +1.216.383.4019

## 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

##### Health hazards

Skin sensitisation

Category 1

H317 - May cause an allergic skin reaction.

Carcinogenicity

Category 2

H351 - Suspected of causing cancer.

Specific target organ toxicity - repeated exposure

Category 1 (Respiratory system)

H372 - Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

**Hazard summary** Not available.

## 2.2. Label elements

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

**Contains:** Aluminium, COPPER FLAKES (COATED WITH ALIPHATIC ACID), Iron, magnesium, powder or turnings, NICKEL POWDER; [PARTICLE DIAMETER < 1MM], Silicon

#### Hazard pictograms



**Signal word** Danger

#### Hazard statements

H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H372 Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

### 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

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Aluminium	71 - 87	7429-90-5 231-072-3	-	013-002-00-1	
<b>Classification:</b> Aquatic Acute 1;H400, Aquatic Chronic 1;H410					T
Silicon	9 - 24	7440-21-3 231-130-8	-	-	
<b>Classification:</b> -					
COPPER FLAKES (COATED WITH ALIPHATIC ACID)	1,8 - 2,2	7440-50-8 231-159-6	01-2119480154-42-0080	-	
<b>Classification:</b> -					

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Iron	1,6 - 2	7439-89-6 231-096-4	-	-	
<b>Classification:</b> STOT RE 1;H372					
NICKEL POWDER; [PARTICLE DIAMETER < 1MM]	0,7 - 1,1	7440-02-0 231-111-4	01-2119438727-29-0049	028-002-00-7	
<b>Classification:</b> Skin Sens. 1;H317, STOT SE 3;H335, Carc. 2;H351, STOT RE 2;H373					7,S
magnesium, powder or turnings	0,5 - 0,7	7439-95-4 231-104-6	-	-	
<b>Classification:</b> Flam. Sol. 1;H228, Self-heat. 2;H252, Water-React. 2;H261					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

Prolonged exposure may cause chronic effects.

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

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

## 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. Do not use water jet as an extinguisher, as this will spread the fire. Carbon dioxide (CO<sub>2</sub>).

### 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. Pressure-demand self-contained breathing apparatus must be worn by firefighters or any other persons potentially exposed to the particulate released during or after a fire.

**Special firefighting procedures** Water runoff can cause environmental damage.

## 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. Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Use personal protective equipment as required. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Use appropriate container to avoid environmental contamination. Do not empty into drains. Wear suitable gloves.

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

Store locked up. Use appropriate container to avoid environmental contamination. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a dry place. Keep out of the reach of children.

### 7.3. Specific end use(s)

Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Slovakia. OELs for carcinogens and mutagens. Regulation No. 46/2002 on carcinogenic and mutagenic substances

Components	Type	Value	Form
NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)	TWA	0,05 mg/m <sup>3</sup>	Inhalable fraction.

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

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	4 mg/m <sup>3</sup> 1,5 mg/m <sup>3</sup>	Inhalable fraction. Respirable fraction.
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup> 0,2 mg/m <sup>3</sup>	Inhalable fraction. Respirable fume.
Iron (CAS 7439-89-6)	TWA	6 mg/m <sup>3</sup>	
Silicon (CAS 7440-21-3)	TWA	4 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	Respirable fraction. Inhalable fraction.

#### Biological limit values

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

Components	Value	Determinant	Specimen	Sampling Time
Aluminium (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 contact with particulate or solutions. Wear gloves to prevent metal cuts and skin abrasions during handling.

###### - Other

Protective overgarments or work clothing must be worn by persons who may become contaminated with particulate during activities.

<b>Respiratory protection</b>	When airborne exposures exceed or have the potential to exceed the occupational exposure limits, approved respirators must be used as specified by an Industrial Hygienist or other qualified professional. Respirator users must be medically evaluated to determine if they are physically capable of wearing a respirator. Quantitative and/or qualitative fit testing and respirator training must be satisfactorily completed by all personnel prior to respirator use. Users of tight fitting respirators must be clean shaven on those areas of the face where the respirator seal contacts the face. Use pressure-demand airline respirators when performing jobs with high potential exposures such as changing filters in a baghouse air cleaning device.
<b>Thermal hazards</b>	Not applicable.
<b>Hygiene measures</b>	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.
<b>Environmental exposure controls</b>	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

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Colour</b>	Silver. Grey metallic.
<b>Odour</b>	None.
<b>Odour threshold</b>	Not applicable.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	> 548 °C (> 1018,4 °F) estimated / Not applicable.
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	None known.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit – upper (%)</b>	Not applicable.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Relative density</b>	Not applicable.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>Viscosity</b>	Not applicable.
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.

### 9.2. Other information

<b>Density</b>	2,80 g/cm <sup>3</sup> estimated
<b>Specific gravity</b>	2,8 estimated

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Not available.
<b>10.2. Chemical stability</b>	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** Prolonged inhalation may be harmful.

**Skin contact** No adverse effects due to skin contact are expected.

**Eye contact** Direct contact with eyes may cause temporary irritation.

**Ingestion** May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

**Symptoms** Direct contact with eyes may cause temporary irritation.

### 11.1. Information on toxicological effects

**Acute toxicity** Not applicable.

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

**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

#### IARC Monographs. Overall Evaluation of Carcinogenicity

NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0) 2B Possibly carcinogenic to humans.

**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** Causes damage to organs ( ) through prolonged or repeated exposure by inhalation.

**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 Silicon Alloy		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Fish 1,475 mg/l, 96 hours estimated
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)		
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	EC50	Blue crab ( <i>Callinectes sapidus</i> ) 0,0031 mg/l
Fish	LC50	Fathead minnow ( <i>Pimephales promelas</i> ) 0,0219 - 0,0446 mg/l, 96 hours

Components	Species	Test Results
NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)
		0,06 mg/l, 4 days

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

<b>12.2. Persistence and degradability</b>	No data is available on the degradability of this product.
<b>12.3. Bioaccumulative potential</b>	No data available.
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.
<b>12.6. Other adverse effects</b>	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

<b>Residual waste</b>	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).
<b>Contaminated packaging</b>	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.
<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Special precautions</b>	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**

Aluminium (CAS 7429-90-5)

COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)

NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)

**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**

Aluminium (CAS 7429-90-5)

NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)

**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**

Aluminium (CAS 7429-90-5)

COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)

magnesium, powder or turnings (CAS 7439-95-4)

**Other regulations**

The product is classified and labelled in accordance with EC directives or respective national laws. Pregnant women should not work with the product, if there is the least risk of exposure.

**National regulations**

Follow national regulation for work with chemical agents. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

**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 available.

**Full text of any H-statements not written out in full under Sections 2 to 15**

H228 Flammable solid.

H252 Self-heating in large quantities; may catch fire.

H261 In contact with water releases flammable gases.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H372 Causes damage to organs through prolonged or repeated exposure by inhalation.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Revision information**

None.

**Training information**

Not available.



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