



PRODUCT INFORMATION SHEET

MATERION

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

1.1. Product identifier

Trade name or designation of the mixture	Aluminum Silicon Alloy
Registration number	-
Document number	L64
Synonyms	AMC4632, AMC4632E, AMC4631, AMC4630, Aluminum Silicon Alloy
Issue date	27-August-2019
Version number	04
Revision date	21-August-2023

1.3. Details of the supplier of the product information sheet

Supplier

Company name	Materion Brush Inc.
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.
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Supersedes date	21-August-2023
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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 Brush Inc.
Address	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States

Division

Telephone	1.216.383.4019
e-mail	ehs@materion.com
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1.4. Emergency telephone number	See Section 16.
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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.
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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.

H372 - Causes damage to organs (Respiratory system) through prolonged or repeated exposure.

Hazard summary

Causes damage to organs through prolonged or repeated exposure. Suspected of causing cancer. May cause an allergic skin reaction. Prolonged exposure may cause chronic effects. Occupational exposure to the substance or mixture may cause adverse health effects.

2.2. Label elements**Label according to Regulation (EC) No. 1272/2008 as amended****Contains:**

Aluminium, Copper, Iron, magnesium, powder or turnings, Nickel, Silicon

Hazard pictograms**Signal word**

Danger

Hazard statements

H317

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.

H372

May cause an allergic skin reaction.

H351

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

H372

Suspected of causing cancer.

Causes damage to organs (Respiratory system) through prolonged or repeated exposure

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/hearing 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

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

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	
Classification: Aquatic Acute 1;H400, Aquatic Chronic 1;H410					T

Material name: Aluminum Silicon Alloy

PIS BULGARIA

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Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Silicon	9 - 24	7440-21-3 231-130-8	-	-	
Classification: -					
Copper	1,8 - 2,2	7440-50-8 231-159-6	01-2119480154-42-0080	-	
Classification: -					
Iron	1,6 - 2	7439-89-6 231-096-4	-	-	
Classification: STOT RE 1;H372					
Nickel	0,7 - 1,1	7440-02-0 231-111-4	01-2119438727-29-0049	028-002-00-7	
Classification: 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	-	-	
Classification: Flam. Sol. 1;H228, Self-heat. 2;H252, Water-React. 2;H261					T

List of abbreviations and symbols that may be used above

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

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information	If exposed or concerned: get medical attention/advice. IF exposed or concerned: Get medical advice/attention. 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. Wash contaminated clothing before reuse.
4.1. Description of first aid measures	
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
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	May cause an allergic skin reaction. Dermatitis. Rash. 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 (CO2).
5.2. Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.
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.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. As supplied, this product poses no special release issues.

For emergency responders

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

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. The product is immiscible with water and will spread on the water surface. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Put material in suitable, covered, labeled containers.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13. 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 breathing dust/fume/gas/mist/vapours/spray. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Do not empty into drains. Use appropriate container to avoid environmental contamination. Observe good industrial hygiene practices. Wear suitable gloves.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Store in a cool, dry place out of direct sunlight. Use appropriate container to avoid environmental contamination. Keep container tightly closed. Store in tightly closed container. Store in a dry place. Store away from incompatible materials (see Section 10 of the SDS).

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**

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	2 mg/m3	
		10 mg/m3	Dust.
		1,5 mg/m3	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	0,1 mg/m3	
Iron (CAS 7439-89-6)	TWA	6 mg/m3	Inhalable fraction.
Nickel (CAS 7440-02-0)	TWA	0,05 mg/m3	

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 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	If contact is likely, safety glasses with side shields are recommended. 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 appropriate chemical resistant gloves. Wear gloves to prevent contact with particulate or solutions. Wear gloves to prevent metal cuts and skin abrasions during handling.
- Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Protective overgarments or work clothing must be worn by persons who may become contaminated with particulate during activities.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. 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.
Thermal hazards	Not applicable.
Hygiene measures	Observe any medical surveillance requirements. 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. 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. Contaminated work clothing should not be allowed out of the workplace.
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. Grey metallic.
Odour	None.
Odour threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	> 548 °C (> 1018,4 °F) estimated / Not applicable.
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 - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit – upper (%)	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	2,80 g/cm3 estimated
Specific gravity	2,8 estimated

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	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents. Chlorine. Fluorine.
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.
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Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
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. May cause an allergic skin reaction. Dermatitis. Rash.
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11.1. Information on toxicological effects

Acute toxicity	Not applicable.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation. Due to partial or complete lack of data the classification is not possible.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitisation	Not a respiratory sensitizer. Due to partial or complete lack of data the classification is not possible
Skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Nickel (CAS 7440-02-0)	2B Possibly carcinogenic to humans.
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Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Causes damage to organs (Respiratory system) through prolonged or repeated exposure. Causes damage to organs () through prolonged or repeated exposure by inhalation.
Aspiration hazard	Not an aspiration hazard. Due to partial or complete lack of data the classification is not possible
Mixture versus substance information	No information available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity	Based on available data, the classification criteria are not met for hazardous to the aquatic environment.
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Product	Species		Test Results
Aluminum Silicon Alloy			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fish	1,475 mg/l, 96 hours estimated
Components	Species		Test Results

Copper (CAS 7440-50-8)

Aquatic

Acute

Crustacea

EC50

Blue crab (*Callinectes sapidus*)

0,0031 mg/l

Fish

LC50

Fathead minnow (*Pimephales promelas*)

0,0219 - 0,0446 mg/l, 96 hours

Nickel (CAS 7440-02-0)

Aquatic

Acute

Fish

LC50

Rainbow trout,donaldson trout
(*Oncorhynchus mykiss*)

0,06 mg/l, 4 days

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

This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

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

Aluminium (CAS 7429-90-5)

Copper (CAS 7440-50-8)

Nickel (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 (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 (CAS 7440-50-8)

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

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended.

National regulations

According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

CAS: Chemical Abstract Service.

CEN: European Committee for Standardization.

IATA: International Air Transport Association.

IBC: Intermediate Bulk Container.

IMDG: International Maritime Dangerous Goods.

MARPOL: International Convention for the Prevention of Pollution from Ships.

PBT: Persistent, bioaccumulative, toxic.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

STEL: Short term exposure limit.

TWA: Time Weighted Average.

References

vPvB: Very persistent and very bioaccumulative.

Information on evaluation method leading to the classification of mixture

Not available.

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Training information

Follow training instructions when handling this material.

Further information

Transportation Emergency

Call Chemtrec at:

US: 800.424.9300

International: 703.741.5970

Spain: 900.868.538

Switzerland: 0800.564.402

Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059

South Korea Toll-free Number – 080-880-0468

Disclaimer

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).