# MATERION

## PRODUCT INFORMATION SHEET

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

1.1. Product identifier

Trade name or

Aluminum Copper Product

designation of the mixture

Registration number Document number 002
Synonyms None.

Issue date14-May-2019Revision date15-May-2019Supersedes date14-May-2019

Version number 03

1.3. Details of the supplier of the product information sheet

**Supplier** 

**Company name** Materion Advanced Materials Group

**Address** 42 Mt. Ebo Road South

Brewster, NY 10509

**United States** 

**Division** 

**Telephone** 1+845.279.0900 **e-mail** Not available. **Contact person** Not available.

1.4. Emergency telephone

Chemtrec

1+703.527.3887

number

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

Identified usesNot available.Uses advised againstNone known.

**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
Acute toxicity, inhalation Category 3
Serious eye damage/eye irritation Category 2

**Hazard summary** Not available.

2.2. Label elements

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

**Contains:** Aluminium, Copper

Hazard pictograms None.

Signal word Warning

**Hazard statements** 

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.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements** 

**Prevention** 

P273 Avoid release to the environment.

Response

P391 Collect spillage.

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**Storage** Not available.

**Disposal** 

Dispose of contents/container in accordance with local/regional/national/international regulations. P501

Supplemental label

information

None.

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	90 - 99,9	7429-90-5 231-072-3	-	013-002-00-1	
Classification:	Aquatic Acute 1;H400, A	quatic Chronic 1;H	410		T
Copper	0,1 - 10	7440-50-8 231-159-6	01-2119480154-42-0080	029-019-01-X	
Classification:	STOT SE 3;H335				

### **SECTION 4: First aid measures**

**General information** Not available.

4.1. Description of first aid measures

**Inhalation** Not available. Skin contact Not available. **Eve contact** Not available. **Ingestion** Not available. 4.2. Most important Not available.

symptoms and effects, both

acute and delayed

4.3. Indication of any Not available.

immediate medical attention and special treatment

needed

## **SECTION 5: Firefighting measures**

**General fire hazards** Not available.

5.1. Extinguishing media

Suitable extinguishing

Not available.

media

media

**Unsuitable extinguishing** 

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

Not available.

precautions

6.3. Methods and material for Not available.

containment and cleaning up

6.4. Reference to other Not available.

sections

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# **SECTION 7: Handling and storage**

7.1. Precautions for safe

Not available.

handling

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

#### Occ

Components	Туре	Value	Form
Aluminium (CAS 7429-90-5)	MAK	5 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.
	STEL	20 mg/m3	Inhalable fraction.
		10 mg/m3	Respirable fraction.
Copper (CAS 7440-50-8)	MAK	1 mg/m3	Inhalable fraction.
		0,1 mg/m3	Fume and respirable dus
	STEL	4 mg/m3	Inhalable fraction.
		0,4 mg/m3	Fume and respirable dus
Belgium. Exposure Limit Values.			
Components	Туре	Value	Form
Aluminium (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0,2 mg/m3	Fume.
Bulgaria. OELs. Regulation No 13 Components	3 on protection of workers a Type	gainst risks of exposure to o Value	chemical agents at work Form
	TWA	2 mg/m3	
,		10 mg/m3	Dust.
		1,5 mg/m3	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	0,1 mg/m3	·
Croatia. Dangerous Substance E	xposure Limit Values in the	Workplace (ELVs), Annexes	1 and 2, Narodne Novine,
13/09	Toma	Value	Form
Components	Туре	Value	
Aluminium (CAS 7429-90-5)	MAC	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.
Copper (CAS 7440-50-8)	MAC	0,21 mg/m3	Dust and fume.
	STEL	2 mg/m3	Dust and fume.
Cyprus. OELs. Control of factory amended.	atmosphere and dangerous	substances in factories regu	ulation, PI 311/73, as
Components	Туре	Value	Form
Copper (CAS 7440-50-8)	TWA	0,2 mg/m3	Fume.
Czech Republic. OELs. Governme Components	ent Decree 361 Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	10 mg/m3	Dust.
Copper (CAS 7440-50-8)	Ceiling	2 mg/m3	Dust.
Copper (CAS /TTU-30-0)	Ceiling	2 mg/m3 0,2 mg/m3	Fume.
	TWA	0,2 mg/m3 1 mg/m3	
	IVVA	1 mg/m3 0,1 mg/m3	Dust. Fume.

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Denmark. Exposure Limit Values Components	Туре	Value	Form
Aluminium (CAS 7429-90-5)	TLV	5 mg/m3	Dust and fume.
		5 mg/m3	Fume.
		2 mg/m3	Respirable dust and/or fume.
Copper (CAS 7440-50-8)	TLV	1 mg/m3	Dust.
		0,1 mg/m3	Fume.
Estonia. OELs. Occupational Expo September 2001)		-	ation No. 293 of 18
Components	Туре	Value	Form
Aluminium (CAS 7429-90-5)	TWA	4 mg/m3	Respirable dust.
		10 mg/m3	Total dust.
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Total dust.
		0,2 mg/m3	Respirable dust.
Finland. Workplace Exposure Limi	its		
Components	Туре	Value	Form
Aluminium (CAS 7429-90-5)	TWA	1,5 mg/m3	Welding fume.
Copper (CAS 7440-50-8)	TWA	0,1 mg/m3	Respirable dust and/or fume.
		0,02 mg/m3	Respirable.
France. Threshold Limit Values (V Components	LEP) for Occupational Expo Type	sure to Chemicals in France Value	e, INRS ED 984 Form
Aluminium (CAS 7429-90-5)	VME	5 mg/m3	Dust.
Regulatory status: Indicative	limit (VL)		
		5 mg/m3	Welding fume.
Regulatory status: Indicative	limit (VL)		
		10 mg/m3	
Regulatory status: Indicative			
Copper (CAS 7440-50-8)	VLE	2 mg/m3	Dust.
<b>Regulatory status:</b> Indicative		1 / 2	Donat
Descriptions status - Indicative	VME	1 mg/m3	Dust.
<b>Regulatory status:</b> Indicative	ilmit (VL)	0,2 mg/m3	Fume.
Regulatory status: Indicative	limit (VI.)	0,2 1119/1113	i uilie.
Germany. DFG MAK List (advisory Compounds in the Work Area (DF	OELs). Commission for the	Investigation of Health Ha	zards of Chemical
Components	Туре	Value	Form
	TWA	4 mg/m3	Inhalable fraction.
, /		3,	
		1,5 ma/m3	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	1,5 mg/m3 0,01 mg/m3	•
		0,01 mg/m3	Respirable fraction. Respirable fraction.
Germany. TRGS 900, Limit Values		0,01 mg/m3	•
Germany. TRGS 900, Limit Values Components	in the Ambient Air at the V	0,01 mg/m3	Respirable fraction.
Germany. TRGS 900, Limit Values Components	in the Ambient Air at the V Type	0,01 mg/m3 Vorkplace Value	Respirable fraction.  Form
Germany. TRGS 900, Limit Values Components Aluminium (CAS 7429-90-5)	in the Ambient Air at the V Type AGW	0,01 mg/m3  Vorkplace  Value  10 mg/m3	Respirable fraction.  Form  Inhalable fraction.
Germany. TRGS 900, Limit Values Components Aluminium (CAS 7429-90-5) Greece. OELs (Decree No. 90/199	in the Ambient Air at the V Type AGW	0,01 mg/m3  Vorkplace  Value  10 mg/m3	Respirable fraction.  Form  Inhalable fraction.
Germany. TRGS 900, Limit Values Components Aluminium (CAS 7429-90-5) Greece. OELs (Decree No. 90/199 Components	in the Ambient Air at the V Type AGW 9, as amended)	0,01 mg/m3  Vorkplace  Value  10 mg/m3 1,25 mg/m3  Value	Form  Inhalable fraction. Respirable fraction.
Germany. TRGS 900, Limit Values Components Aluminium (CAS 7429-90-5) Greece. OELs (Decree No. 90/199 Components	in the Ambient Air at the V Type AGW 9, as amended) Type	0,01 mg/m3  Vorkplace  Value  10 mg/m3 1,25 mg/m3  Value  5 mg/m3	Respirable fraction.  Form  Inhalable fraction. Respirable fraction.  Form  Inhalable
Germany. TRGS 900, Limit Values Components Aluminium (CAS 7429-90-5) Greece. OELs (Decree No. 90/199 Components	in the Ambient Air at the V Type AGW 9, as amended) Type	0,01 mg/m3  Value  10 mg/m3 1,25 mg/m3  Value  5 mg/m3 10 mg/m3	Respirable fraction.  Form  Inhalable fraction. Respirable fraction.  Form  Inhalable Pyrophoric powder.
Copper (CAS 7440-50-8)  Germany. TRGS 900, Limit Values Components  Aluminium (CAS 7429-90-5)  Greece. OELs (Decree No. 90/199 Components  Aluminium (CAS 7429-90-5)	in the Ambient Air at the V Type AGW 9, as amended) Type	0,01 mg/m3  Vorkplace  Value  10 mg/m3 1,25 mg/m3  Value  5 mg/m3	Respirable fraction.  Form  Inhalable fraction. Respirable fraction.  Form  Inhalable

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Greece. OELs (Decree No. 90/1999 Components	9, as amended) Type	Value	Form
	TWA	1 mg/m3	Dust.
		0,2 mg/m3	Fume.
Hungary. OELs. Joint Decree on Ch	nemical Safety of Workplace	es	
Components	Туре	Value	Form
Aluminium (CAS 7429-90-5)	TWA	6 mg/m3	Respirable.
Copper (CAS 7440-50-8)	STEL	4 mg/m3	
		0,4 mg/m3	Smoke.
	TWA	1 mg/m3	
		0,1 mg/m3	Smoke.
Iceland. OELs. Regulation 154/199	99 on occupational exposur	e limits	
Components	Туре	Value	Form
Aluminium (CAS 7429-90-5)	TWA	5 mg/m3	Fume.
		10 mg/m3	Dust.
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Total dust.
		0,1 mg/m3	Respirable dust.
Ireland. Occupational Exposure Lir	mits		
Components	Туре	Value	Form
Aluminium (CAS 7429-90-5)	TWA	1 ppm	Respirable dust.
Copper (CAS 7440-50-8)	STEL	2 mg/m3	Dust and mist.
	TWA	1 mg/m3	Dust and mist.
		0,2 mg/m3	Fume.
Italy. Occupational Exposure Limit	ts		
Components	Туре	Value	Form
Aluminium (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0,2 mg/m3	Fume.
Latvia. OELs. Occupational exposu			nment
Components	Туре	Value	
Aluminium (CAS 7429-90-5)	TWA		
		2 mg/m3	
Copper (CAS 7440-50-8)	STEL	1 mg/m3	
Copper (CAS 7440-50-8)		=	
Lithuania. OELs. Limit Values for C	STEL TWA	1 mg/m3 0,5 mg/m3	Form
Lithuania. OELs. Limit Values for C Components	STEL TWA Chemical Substances, General	1 mg/m3 0,5 mg/m3 ral Requirements	<b>Form</b> Inhalable fraction.
Lithuania. OELs. Limit Values for C Components	STEL TWA Chemical Substances, Gener Type	1 mg/m3 0,5 mg/m3 ral Requirements Value	
Lithuania. OELs. Limit Values for C Components Aluminium (CAS 7429-90-5)	STEL TWA Chemical Substances, Gener Type	1 mg/m3 0,5 mg/m3 ral Requirements Value 5 mg/m3	Inhalable fraction.
Lithuania. OELs. Limit Values for C Components Aluminium (CAS 7429-90-5)	STEL TWA  Chemical Substances, Gener Type TWA	1 mg/m3 0,5 mg/m3 ral Requirements Value 5 mg/m3 2 mg/m3	Inhalable fraction. Respirable fraction.
Lithuania. OELs. Limit Values for Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Netherlands. OELs (binding)	STEL TWA  Chemical Substances, Generative Type TWA  TWA	1 mg/m3 0,5 mg/m3 ral Requirements Value  5 mg/m3 2 mg/m3 1 mg/m3 0,2 mg/m3	Inhalable fraction. Respirable fraction. Inhalable fraction. Respirable fraction.
Lithuania. OELs. Limit Values for Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Netherlands. OELs (binding)	STEL TWA  Chemical Substances, Gener Type TWA	1 mg/m3 0,5 mg/m3 ral Requirements Value 5 mg/m3 2 mg/m3 1 mg/m3	Inhalable fraction. Respirable fraction. Inhalable fraction.
Lithuania. OELs. Limit Values for Components Aluminium (CAS 7429-90-5) Copper (CAS 7440-50-8) Netherlands. OELs (binding) Components	STEL TWA  Chemical Substances, Generative Type TWA  TWA	1 mg/m3 0,5 mg/m3 ral Requirements Value  5 mg/m3 2 mg/m3 1 mg/m3 0,2 mg/m3	Inhalable fraction. Respirable fraction. Inhalable fraction. Respirable fraction.
Lithuania. OELs. Limit Values for Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Netherlands. OELs (binding) Components  Copper (CAS 7440-50-8)  Norway. Administrative Norms for	STEL TWA  Chemical Substances, Generatype TWA TWA  Type Type TWA  Type TWA	1 mg/m3 0,5 mg/m3 ral Requirements Value  5 mg/m3 2 mg/m3 1 mg/m3 0,2 mg/m3  Value  0,1 mg/m3	Inhalable fraction. Respirable fraction. Inhalable fraction. Respirable fraction. Form
Lithuania. OELs. Limit Values for Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Netherlands. OELs (binding) Components  Copper (CAS 7440-50-8)  Norway. Administrative Norms for Components	STEL TWA  Chemical Substances, Generatype TWA  TWA  Type  TWA  Type  TWA  Type  TWA  Contaminants in the Work	1 mg/m3 0,5 mg/m3  ral Requirements Value  5 mg/m3 2 mg/m3 1 mg/m3 0,2 mg/m3  Value  0,1 mg/m3  place	Inhalable fraction. Respirable fraction. Inhalable fraction. Respirable fraction.  Form Inhalable fraction.
Lithuania. OELs. Limit Values for Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Netherlands. OELs (binding) Components  Copper (CAS 7440-50-8)  Norway. Administrative Norms for Components	STEL TWA  Chemical Substances, Generatype TWA TWA  Type TWA  Type TWA  Tope TWA  Tope TWA  Tope TWA	1 mg/m3 0,5 mg/m3  ral Requirements Value  5 mg/m3 2 mg/m3 1 mg/m3 0,2 mg/m3  Value  0,1 mg/m3  place Value	Inhalable fraction. Respirable fraction. Inhalable fraction. Respirable fraction.  Form Inhalable fraction.  Form
Copper (CAS 7440-50-8)  Lithuania. OELs. Limit Values for Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Netherlands. OELs (binding) Components  Copper (CAS 7440-50-8)  Norway. Administrative Norms for Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)	STEL TWA  Chemical Substances, Generatype TWA TWA  Type TWA  Type TWA  Tope TWA  Tope TWA  Tope TWA	1 mg/m3 0,5 mg/m3  ral Requirements Value  5 mg/m3 2 mg/m3 1 mg/m3 0,2 mg/m3  Value  0,1 mg/m3  place  Value  5 mg/m3	Inhalable fraction. Respirable fraction. Inhalable fraction. Respirable fraction.  Form Inhalable fraction.  Form Welding fume.

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Components	Туре		
Aluminium (CAS 7429-90-5)	TWA	2,5 mg/m3	Inhalable fraction.
		1,2 mg/m3	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	0,2 mg/m3	
Portugal. VLEs. Norm on occupa Components	tional exposure to chemical Type	agents (NP 1796) Value	Form
Aluminium (CAS 7429-90-5)	TWA	1 mg/m3	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0,2 mg/m3	Fume.
Romania. OELs. Protection of w Components	orkers from exposure to che Type	mical agents at the workpla Value	ce Form
Aluminium (CAS 7429-90-5)	STEL	3 mg/m3	Fume.
,		10 mg/m3	Dust.
	TWA	3 mg/m3	Dust.
		1 mg/m3	Fume.
Copper (CAS 7440-50-8)	STEL	1,5 mg/m3	Dust.
11 - (	- · <del></del>	0,2 mg/m3	Fume.
	TWA	0,5 mg/m3	Dust.
Slovakia. OELs. Regulation No. 3		, -	
Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	4 mg/m3	Inhalable fraction.
		1,5 mg/m3	Respirable fraction.
Copper (CAS 7440-50-8)	TWA	1,5 mg/m3 1 mg/m3	Respirable fraction. Inhalable fraction.
Copper (CAS 7440-50-8)	TWA		•
Slovenia. OELs. Regulations con	cerning protection of worke	1 mg/m3 0,2 mg/m3	Inhalable fraction. Respirable fume.
	cerning protection of worke	1 mg/m3 0,2 mg/m3	Inhalable fraction. Respirable fume.
Slovenia. OELs. Regulations con working (Official Gazette of the	cerning protection of worke Republic of Slovenia)	1 mg/m3 0,2 mg/m3 rs against risks due to expos	Inhalable fraction. Respirable fume. sure to chemicals wh
Slovenia. OELs. Regulations con working (Official Gazette of the Components	cerning protection of worke Republic of Slovenia) Type	1 mg/m3 0,2 mg/m3 rs against risks due to expos Value	Inhalable fraction. Respirable fume. sure to chemicals wh Form
Slovenia. OELs. Regulations conworking (Official Gazette of the Components  Copper (CAS 7440-50-8)	cerning protection of worke Republic of Slovenia) Type	1 mg/m3 0,2 mg/m3 rs against risks due to expos Value 1 mg/m3	Inhalable fraction. Respirable fume. sure to chemicals wh Form Inhalable fraction.
Slovenia. OELs. Regulations con working (Official Gazette of the Components	cerning protection of worke Republic of Slovenia) Type	1 mg/m3 0,2 mg/m3 rs against risks due to expos Value 1 mg/m3	Inhalable fraction. Respirable fume. sure to chemicals wh Form Inhalable fraction.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components Copper (CAS 7440-50-8) Spain. Occupational Exposure L	cerning protection of worker Republic of Slovenia) Type TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3	Inhalable fraction. Respirable fume.  sure to chemicals wh  Form  Inhalable fraction. Respirable fume.
Slovenia. OELs. Regulations con working (Official Gazette of the Components Copper (CAS 7440-50-8) Spain. Occupational Exposure L Components	cerning protection of worke Republic of Slovenia) Type TWA imits Type	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3	Inhalable fraction. Respirable fume.  sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form
Slovenia. OELs. Regulations conworking (Official Gazette of the Components Copper (CAS 7440-50-8) Spain. Occupational Exposure L Components Aluminium (CAS 7429-90-5)	cerning protection of worke Republic of Slovenia) Type TWA imits Type	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value 1 mg/m3 0,1 mg/m3  Value 5 mg/m3 10 mg/m3	Inhalable fraction. Respirable fume.  sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume.
Slovenia. OELs. Regulations con working (Official Gazette of the Components Copper (CAS 7440-50-8) Spain. Occupational Exposure L Components	cerning protection of worker Republic of Slovenia) Type  TWA  imits Type  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3	Inhalable fraction. Respirable fume.  sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components  Copper (CAS 7440-50-8)  Spain. Occupational Exposure L Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)	cerning protection of worker Republic of Slovenia) Type  TWA  imits Type  TWA  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components Copper (CAS 7440-50-8) Spain. Occupational Exposure L Components Aluminium (CAS 7429-90-5)	cerning protection of worker Republic of Slovenia) Type  TWA  imits Type  TWA  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components  Copper (CAS 7440-50-8)  Spain. Occupational Exposure L Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)	recerning protection of worker Republic of Slovenia) Type  TWA  TWA  TWA  TWA  TWA  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 onal Exposure Limit Values (	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7)
Slovenia. OELs. Regulations conworking (Official Gazette of the Components Copper (CAS 7440-50-8)  Spain. Occupational Exposure L Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Sweden. OELs. Work Environme Components	cerning protection of worker Republic of Slovenia) Type TWA  imits Type TWA  TWA  TWA  TWA  TWA  TWA  THE Authority (AV), Occupation Type	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 onal Exposure Limit Values ( Value	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7) Form
Slovenia. OELs. Regulations conworking (Official Gazette of the Components Copper (CAS 7440-50-8)  Spain. Occupational Exposure L Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Sweden. OELs. Work Environme Components	cerning protection of worker Republic of Slovenia) Type TWA  imits Type TWA  TWA  TWA  TWA  TWA  TWA  THE Authority (AV), Occupation Type	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 onal Exposure Limit Values ( Value  5 mg/m3	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7) Form  Total dust.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components Copper (CAS 7440-50-8)  Spain. Occupational Exposure L Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Sweden. OELs. Work Environme Components  Aluminium (CAS 7429-90-5)	recerning protection of worker Republic of Slovenia) Type TWA  imits Type TWA  TWA  TWA  TWA  TWA  TWA  TWA  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 onal Exposure Limit Values ( Value  5 mg/m3 2 mg/m3	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7) Form  Total dust. Respirable dust.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components Copper (CAS 7440-50-8)  Spain. Occupational Exposure L Components Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Sweden. OELs. Work Environme Components Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)	recerning protection of worker Republic of Slovenia) Type TWA  imits Type TWA  TWA  TWA  TWA  TWA  TWA  TWA  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 onal Exposure Limit Values ( Value  5 mg/m3 2 mg/m3	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7) Form  Total dust. Respirable dust.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components  Copper (CAS 7440-50-8)  Spain. Occupational Exposure L Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Sweden. OELs. Work Environme Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Copper (CAS 7440-50-8)  Switzerland. SUVA Grenzwerte	cerning protection of worker Republic of Slovenia) Type TWA  imits Type TWA  TWA  TWA  TWA  TWA  TWA  TWA  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3 Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 0,2 mg/m3 value  5 mg/m3 0,1 mg/m3 0,2 mg/m3 0,2 mg/m3 0,1 mg/m3 0,2 mg/m3 0,1 mg/m3	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7) Form  Total dust. Respirable dust. Respirable dust.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components  Copper (CAS 7440-50-8)  Spain. Occupational Exposure Lecomponents  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Sweden. OELs. Work Environme Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Switzerland. SUVA Grenzwerte accomponents	cerning protection of worker Republic of Slovenia) Type  TWA  imits Type  TWA  TWA  TWA  TWA  TWA  TWA  TWA  TW	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 0,2 mg/m3 conal Exposure Limit Values (Value)  5 mg/m3 2 mg/m3 0,01 mg/m3 Value	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7) Form  Total dust. Respirable dust. Respirable dust. Respirable dust.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components  Copper (CAS 7440-50-8)  Spain. Occupational Exposure L Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Sweden. OELs. Work Environme Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Switzerland. SUVA Grenzwerte a Components  Aluminium (CAS 7429-90-5)	cerning protection of worker Republic of Slovenia) Type TWA  imits Type TWA  TWA  TWA  TWA  TWA  TWA  TWA  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 0,2 mg/m3 chal Exposure Limit Values (Value)  5 mg/m3 2 mg/m3 0,01 mg/m3 Value 3 mg/m3	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7) Form  Total dust. Respirable dust. Respirable dust. Respirable fraction.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components  Copper (CAS 7440-50-8)  Spain. Occupational Exposure Lecomponents  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Sweden. OELs. Work Environme Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Switzerland. SUVA Grenzwerte accomponents  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)	cerning protection of worker Republic of Slovenia) Type TWA  imits Type TWA  TWA  TWA  TWA  TWA  TWA  TWA  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 0,2 mg/m3 2 mg/m3 2 mg/m3 0,01 mg/m3 Value  3 mg/m3 0,2 mg/m3 0,2 mg/m3	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7) Form  Total dust. Respirable dust. Respirable dust. Respirable fraction. Inhalable fraction.
Slovenia. OELs. Regulations conworking (Official Gazette of the Components  Copper (CAS 7440-50-8)  Spain. Occupational Exposure L Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Sweden. OELs. Work Environme Components  Aluminium (CAS 7429-90-5)  Copper (CAS 7440-50-8)  Switzerland. SUVA Grenzwerte a Components  Aluminium (CAS 7429-90-5)	cerning protection of worker Republic of Slovenia) Type TWA  imits Type TWA  TWA  TWA  TWA  TWA  TWA  TWA  TWA	1 mg/m3 0,2 mg/m3 rs against risks due to expos  Value  1 mg/m3 0,1 mg/m3  Value  5 mg/m3 10 mg/m3 1 mg/m3 0,2 mg/m3 0,2 mg/m3 2 mg/m3 2 mg/m3 0,01 mg/m3 Value  3 mg/m3 0,2 mg/m3 0,2 mg/m3	Inhalable fraction. Respirable fume.  Sure to chemicals wh  Form  Inhalable fraction. Respirable fume.  Form  Welding fume. Dust. Dust and mist. Fume.  AFS 2015:7) Form  Total dust. Respirable dust. Respirable dust. Respirable fraction. Inhalable fraction.

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UK. EH40 Workplace Exposure	K. EH40 Workplace Exposure Limits (WELs)				
Components	Туре	Value	Form		
		10 mg/m3	Inhalable dust.		
Copper (CAS 7440-50-8)	STEL	2 mg/m3	Inhalable dusts and mists.		
	TWA	1 mg/m3	Inhalable dusts and mists.		

0,2 mg/m3

Fume.

#### **Biological limit values**

Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)				
Components	Value	Determinant	Specimen	Sampling Time
Aluminium (CAS 742	9-90-5) 200 mg/l	Aluminium	Urine	*

<sup>\* -</sup> For sampling details, please see the source document.

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

<sup>\* -</sup> For sampling details, please see the source document.

Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)					
Components	Value	Determinant	Specimen	Sampling Time	
Aluminium (CAS 7429-9	0-5) 60 μg/g	Aluminium	Creatinine in	*	
			urine		

<sup>\* -</sup> For sampling details, please see the source document.

**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. Not available. Eye/face protection

Skin protection

Not available. - Hand protection Not available. - Other **Respiratory protection** Not available. Thermal hazards Not available. **Hygiene measures** Not available. Not available. **Environmental exposure** controls

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

**Appearance** 

**Physical state** Solid. **Form** Not available. Colour Not available. Odour Not available. Not available. **Odour threshold** Not available.

Melting point/freezing point 660 °C (1220 °F) estimated Initial boiling point and 2327 °C (4220,6 °F) estimated

boiling range

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Flash point Not available. Not available. **Evaporation rate** Flammability (solid, gas) Not available. Upper/lower flammability or explosive limits

Flammability limit - lower

(%)

Flammability limit -

upper (%)

Not available.

Not available.

0,06 hPa estimated Vapour pressure

Vapour density Not available. **Relative density** Not available.

Solubility(ies)

Not available. Solubility (water) **Partition coefficient** Not available.

(n-octanol/water)

**Auto-ignition temperature** Not available. **Decomposition temperature** Not available. **Viscosity** Not available. **Explosive properties** Not available. **Oxidising properties** Not available.

9.2. Other information

**Density** 3,27 g/cm3 estimated

3,27 estimated Specific gravity

## **SECTION 10: Stability and reactivity**

10.1. Reactivity Not available. 10.2. Chemical stability Not available. 10.3. Possibility of hazardous Not available.

reactions

10.4. Conditions to avoid Not available. Not available. 10.5. Incompatible materials Not available. 10.6. Hazardous

decomposition products

**General information** 

## **SECTION 11: Toxicological information**

Information on likely routes of exposure **Inhalation** Not available. Skin contact Not available. **Eye contact** Not available. Ingestion Not available. Not available.

## 11.1. Information on toxicological effects

**Acute toxicity** No data available. Not available. Skin corrosion/irritation Serious eye damage/eye Not available.

irritation

**Symptoms** 

Not available.

Not available. Respiratory sensitisation Not available. Skin sensitisation 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.

Not available. Reproductive toxicity

Material name: Aluminum Copper Product PIS EU 1241 Version #: 03 Revision date: 15-May-2019 Print date: 15-May-2019 8 / 10 Specific target organ toxicity

- single exposure

Not available.

Specific target organ toxicity

- repeated exposure

Not available.

**Aspiration hazard** 

Mixture versus substance

information

Not available. Not available.

Other information Not available.

## **SECTION 12: Ecological information**

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

**Product Species Test Results** 

**Aluminum Copper Product** 

**Aquatic** 

Crustacea EC50 Daphnia 1,7371 mg/l, 48 hours estimated LC50 Fish Fish 25,5603 mg/l, 96 hours estimated

12.2. Persistence and

degradability

Not available.

12.3. Bioaccumulative

potential

Not available.

**Partition coefficient** 

Not available.

n-octanol/water (log Kow)

**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** 

Copper (CAS 7440-50-8) Copper (Cu) 1000 ug/l

Copper (Cu) 15 ug/l

**Estonia Dangerous substances in soil Data** 

Copper (CAS 7440-50-8) Copper (Cu) 100 mg/kg

> Copper (Cu) 150 mg/kg Copper (Cu) 500 mg/kg

# **SECTION 13: Disposal considerations**

#### 13.1. Waste treatment methods

**Residual waste** Not available. Not available. Contaminated packaging **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

Material name: Aluminum Copper Product PIS EU 1241 Version #: 03 Revision date: 15-May-2019 Print date: 15-May-2019 9 / 10 Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

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

Aluminium (CAS 7429-90-5) Copper (CAS 7440-50-8)

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)

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)

**National regulations** Not available. 15.2. Chemical safety Not available.

assessment

#### **SECTION 16: Other information**

Not available. List of abbreviations Not available. References **Training information** Not available.

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