



# PRODUCT INFORMATION SHEET

**MATERION**

## 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>	Zirconium Copper Targets
<b>Registration number</b>	-
<b>Document number</b>	G54
<b>Synonyms</b>	None.
<b>Issue date</b>	07-June-2019
<b>Version number</b>	03
<b>Revision date</b>	22-September-2021
<b>Supersedes date</b>	23-February-2021

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

<b>Identified uses</b>	Manufacture of computer, electronic and optical products, electrical equipment Scientific research and development Other: Manufacture of medical and defense equipment
<b>Uses advised against</b>	Professional uses: Public domain (administration, education, entertainment, services, craftsmen) Consumer uses: Private households (= general public = consumers)

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

#### Supplier

<b>Company name</b>	Materion Advanced Materials
<b>Address</b>	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States
<b>Division</b>	
<b>Telephone</b>	1.216.383.4019
<b>e-mail</b>	ehs@materion.com
<b>Contact person</b>	Theodore Knudson

### 1.4. Emergency telephone number

See Section 16.

## 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

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

#### Hazard summary

The products are classified as articles and, as such, do not present a physical or health hazard in the present form. If the products are processed or handled in ways that generate particles (dust, fume, particles or powder) and/or chemical compounds, a potential health hazard could exist and risk management measures must be taken to minimize risk.

### 2.2. Label elements

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

<b>Contains:</b>	COPPER FLAKES (COATED WITH ALIPHATIC ACID)
<b>Hazard pictograms</b>	None.
<b>Signal word</b>	None.
<b>Hazard statements</b>	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.

#### Precautionary statements

<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.

**Supplemental label information** For further information, please contact the Product Stewardship Department at +1.216.383.4019.

**2.3. Other hazards** Not a PBT or vPvB substance or mixture.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
COPPER FLAKES (COATED WITH ALIPHATIC ACID)	25 - 50	7440-50-8 231-159-6	01-2119480154-42-0080	-	
<b>Classification:</b> -					
Other components below reportable levels	50 - 75				

## SECTION 4: First aid measures

#### General information

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

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.

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

Under normal conditions of intended use, this material does not pose a risk to health.

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

Not available.

## SECTION 5: Firefighting measures

#### General fire hazards

No unusual fire or explosion hazards noted.

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Powder. Dry sand.
<b>Unsuitable extinguishing media</b>	Carbon dioxide (CO <sub>2</sub> ).

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

Non-combustible, substance itself does not burn.

#### 5.3. Advice for firefighters

<b>Special protective equipment for firefighters</b>	Wear suitable protective equipment.
<b>Special firefighting procedures</b>	Move containers from fire area if you can do so without risk.

#### 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

<b>For non-emergency personnel</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the PIS.
<b>For emergency responders</b>	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the PIS.

#### 6.2. Environmental precautions

No special environmental precautions required.

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

Stop the flow of material, if this is without risk. For waste disposal, see section 13 of the PIS.

#### 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** Observe good industrial hygiene practices.
- 7.2. Conditions for safe storage, including any incompatibilities** Store away from incompatible materials (see Section 10 of the PIS).
- 7.3. Specific end use(s)** Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	MAK	1 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	0,1 mg/m <sup>3</sup>	Fume and respirable dust.
		4 mg/m <sup>3</sup>	Inhalable fraction.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	MAK	0,4 mg/m <sup>3</sup>	Fume and respirable dust.
		5 mg/m <sup>3</sup>	Inhalable fraction.

##### Belgium. Exposure Limit Values

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
	STEL	0,2 mg/m <sup>3</sup>	Fume.
10 mg/m <sup>3</sup>			
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	TWA	5 mg/m <sup>3</sup>	

##### Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	0,1 mg/m <sup>3</sup>

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

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	MAC	1 mg/m <sup>3</sup>	
	STEL	0,2 mg/m <sup>3</sup>	Dust and fume.
		2 mg/m <sup>3</sup>	Dust and fume.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	MAC	2 mg/m <sup>3</sup>	
	STEL	5 mg/m <sup>3</sup>	
		10 mg/m <sup>3</sup>	

##### Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	0,2 mg/m <sup>3</sup>	Fume.

**Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.**

Components	Type	Value	Form
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	TWA	5 mg/m <sup>3</sup>	

**Czech Republic. OELs. Government Decree 361**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	Ceiling	2 mg/m <sup>3</sup>	Dust.
	TWA	0,2 mg/m <sup>3</sup>	Fume.
		1 mg/m <sup>3</sup>	Dust.
		0,1 mg/m <sup>3</sup>	Fume.

**Denmark. Exposure Limit Values**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TLV	1 mg/m <sup>3</sup>	Dust.
		0,1 mg/m <sup>3</sup>	Fume.

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Total dust.
		0,2 mg/m <sup>3</sup>	Fine dust.

**Finland. Workplace Exposure Limits**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	0,1 mg/m <sup>3</sup>	Respirable dust and/or fume.
		0,02 mg/m <sup>3</sup>	Respirable.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	TWA	1 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	VLE	2 mg/m <sup>3</sup>	Dust.
	VME	1 mg/m <sup>3</sup>	Dust.
		0,2 mg/m <sup>3</sup>	Fume.

**Regulatory status:** Indicative limit (VL)

**Regulatory status:** Indicative limit (VL)

**Regulatory status:** Indicative limit (VL)

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	0,01 mg/m <sup>3</sup>	Respirable fraction.

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

Components	Type	Value	Form
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	AGW	1 mg/m <sup>3</sup>	Inhalable fraction.

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

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	STEL	2 mg/m <sup>3</sup>	Dust.
	TWA	1 mg/m <sup>3</sup> 0,2 mg/m <sup>3</sup>	Dust. Fume.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	STEL	10 mg/m <sup>3</sup>	
	TWA	5 mg/m <sup>3</sup>	

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	STEL	4 mg/m <sup>3</sup>	
	TWA	0,4 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> 0,1 mg/m <sup>3</sup>	Smoke. Smoke.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	STEL	20 mg/m <sup>3</sup>	
	TWA	5 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Total dust.
		0,1 mg/m <sup>3</sup>	Respirable dust.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	TWA	5 mg/m <sup>3</sup>	

**Ireland. Occupational Exposure Limits**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
		0,2 mg/m <sup>3</sup>	Fume.

**Italy. Occupational Exposure Limits**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
		0,2 mg/m <sup>3</sup>	Fume.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	STEL	10 mg/m <sup>3</sup>	
	TWA	5 mg/m <sup>3</sup>	

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment**

Components	Type	Value	
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	STEL	1 mg/m <sup>3</sup>	
	TWA	0,5 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Inhalable fraction.
		0,2 mg/m <sup>3</sup>	Respirable fraction.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	TWA	6 mg/m <sup>3</sup>	

**Netherlands. OELs (binding)**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	0,1 mg/m <sup>3</sup>	Inhalable fraction.

**Norway. Administrative Norms for Contaminants in the Workplace**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TLV	1 mg/m <sup>3</sup>	Dust.
		0,1 mg/m <sup>3</sup>	Fume.

**Poland. Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	0,2 mg/m <sup>3</sup>	
		10 mg/m <sup>3</sup>	
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	TWA	5 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Dust and mist.
		0,2 mg/m <sup>3</sup>	Fume.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	STEL	10 mg/m <sup>3</sup>	
		TWA	5 mg/m <sup>3</sup>

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

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	STEL	1,5 mg/m <sup>3</sup>	Dust.
		0,2 mg/m <sup>3</sup>	Fume.
	TWA	0,5 mg/m <sup>3</sup>	Dust.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	STEL	10 mg/m <sup>3</sup>	
		TWA	5 mg/m <sup>3</sup>

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

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	1 mg/m <sup>3</sup>	Inhalable fraction.
		0,2 mg/m <sup>3</sup>	Respirable fume.

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

Components	Type	Value	Form
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	TWA	1 mg/m <sup>3</sup>	

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Components	Type	Value	Form
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	TWA	1 mg/m <sup>3</sup>	Inhalable fraction.

**Spain. Occupational Exposure Limits**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	0,1 mg/m <sup>3</sup>	Respirable fraction.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	STEL	10 mg/m <sup>3</sup>	
	TWA	5 mg/m <sup>3</sup>	

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

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	TWA	0,01 mg/m <sup>3</sup>	Respirable dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	STEL	0,2 mg/m <sup>3</sup>	Inhalable fraction.
	TWA	0,1 mg/m <sup>3</sup>	Inhalable fraction.
ZIRCONIUM POWDER, DRY (NON PYROPHORIC) (CAS 7440-67-7)	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.

**UK. EH40 Workplace Exposure Limits (WELs)**

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	STEL	2 mg/m <sup>3</sup>	Inhalable dusts and mists.
	TWA	1 mg/m <sup>3</sup>	Inhalable dusts and mists.
		0,2 mg/m <sup>3</sup>	Fume.

**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**

Not available.

**Eye/face protection**

If contact is likely, safety glasses with side shields are recommended.

**Skin protection**

<b>- Hand protection</b>	Wear gloves to prevent metal cuts and skin abrasions during handling.
<b>- Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.

**Hygiene measures** 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.

**Environmental exposure 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.

## 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>	Grey.

**Odour** None.

**Odour threshold** Not applicable.

**pH** Not applicable.

**Melting point/freezing point** Not applicable.

**Initial boiling point and boiling range** Not applicable.

**Flash point** Not applicable.

**Evaporation rate** Not applicable.

**Flammability (solid, gas)** Not applicable.

#### Upper/lower flammability or explosive limits

**Explosive limit - lower ( %)** Not applicable.

**Explosive limit - lower ( % ) temperature** Not applicable.

**Explosive limit – upper ( %)** Not applicable.

**Explosive limit - upper ( % ) temperature** 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** Not applicable.

**Flammability** Not flammable.

## SECTION 10: Stability and reactivity

**10.1. Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**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.



<b>10.4. Conditions to avoid</b>	Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	Acids. Alkalies.
<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11: Toxicological information

**General information** The products are classified as articles and, as such, do not present a physical or health hazard in the present form. If the products are processed or handled in ways that generate particles (dust, fume, particles and/or powder), a potential health hazard could exist and risk management measures must be taken to minimize risk.

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	Not likely, due to the form of the product.
<b>Eye contact</b>	Not likely, due to the form of the product.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

**Symptoms** None known.

### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	None known.
<b>Skin corrosion/irritation</b>	Not likely, due to the form of the product.
<b>Serious eye damage/eye irritation</b>	None known.
<b>Respiratory sensitisation</b>	Not a respiratory sensitizer.
<b>Skin sensitisation</b>	Not a skin sensitizer.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.

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

Not listed.

<b>Reproductive toxicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Mixture versus substance information</b>	No information available.
<b>Other information</b>	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.

Components	Species	Test Results
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

**12.2. Persistence and degradability** No data is available on the degradability of any ingredients in the mixture.

**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** Not a PBT or vPvB substance or mixture.

**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.

### 12.7. Additional information

#### Estonia Dangerous substances in soil Data

COPPER FLAKES (COATED WITH ALIPHATIC ACID) (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** 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. Dispose of contents/container in accordance with local/regional/national/international regulations.

**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

COPPER FLAKES (COATED WITH ALIPHATIC ACID) (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**

Not listed.

**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**

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

**Other regulations**

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

**National regulations**

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**

Not available.

**References**

Not available.

**Information on evaluation method leading to the classification of mixture**

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

**Training information**

Follow training instructions when handling this material.

**Further information**

Transportation Emergency  
Call Chemtrec at:  
International: 703.741.5970  
Spain: 900.868.538  
Switzerland: 0800.564.402  
Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059

**Disclaimer**

This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. Materion makes no warranties, expressed or implied, as to the accuracy of the information contained herein. Materion cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.

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).