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

1.1. Product identifier

Product form : Mixture
Trade name/designation : COPPER PASTE DI
Product code : 2500, 36, 4000, 5000, 6000, 9000, 13000, FT, 330000, A33000 / DI / 80-20, 85-15, 90-10, 95-5

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

1.2.1. Relevant identified uses

Main use category : Industrial uses, Professional uses

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

AVL METAL POWDERS n.v.
Elleboogstraat 7
B-8500 Kortrijk - Belgium, Europe
T +32 (0)56 22 00 21 - F +32 (0)56 22 64 14
BE 0405 375 371 - RPR Kortrijk
sales@avlmetalpowders.com - www.avlmetalpowders.com

1.4. Emergency telephone number

Emergency number : +32 (0)475 38 36 83
This telephone number is available 24 hours per day, 7 days per week.

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours, healthcare professionals only)


SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Irrit. 2 H319
Aquatic Acute 1 H400
Aquatic Chronic 2 H411

Full text of hazard classes and H-statements : see section 16

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms :



Signal word :

Warning

Hazard statements :

H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H400 - Very toxic to aquatic life.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements :

P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P391 - Collect spillage.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards :

PBT/vPvB data : This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
copper	(CAS No) 7440-50-8 (EC no) 231-159-6 (REACH-no) 01-2119480154-42-XXXX	80 - 95	Flam. Sol. 1, H228 Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 2, H411
2-methylpentane-2,4-diol	(CAS No) 107-41-5 (EC no) 203-489-0 (EC Index) 603-053-00-3 (REACH-no) 01-2119539582-35-XXXX	5 - 20	Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of H-statements: see section 16

SECTION 4: First aid measures


4.1. Description of first aid measures

Additional advice :

First aider: Pay attention to self-protection. See also section 8. Treat symptomatically. Show this safety data sheet to the doctor in attendance. In case of doubt or persistent symptoms, consult always a physician. Never give anything by mouth to an unconscious person or a person with cramps.

Inhalation :

Provide fresh air. Keep at rest. In case of doubt or persistent symptoms, consult always a physician.

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- Skin contact : Remove contaminated clothing and shoes. After contact with skin, wash immediately with plenty of water and soap. In case of doubt or persistent symptoms, consult always a physician. Wash contaminated clothing before reuse.
- Eyes contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician if irritation develops or persists.
- In case of ingestion : Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Get medical advice/attention.

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

- Inhalation : Inhalation of vapours in high concentration may cause irritation of respiratory system.
- Skin contact : Causes skin irritation.
- Eyes contact : Causes serious eye irritation.
- Ingestion : Harmful if swallowed.

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : ABCD-powder. Dry sand.
- Unsuitable extinguishing media : water.

5.2. Special hazards arising from the substance or mixture

- Specific hazards : The pressure in sealed containers can increase under the influence of heat. Burning produces noxious and toxic fumes. Hazardous combustion products: Carbon oxides, Copper oxides. Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

5.3. Advice for firefighters

- Firefighting instructions : Special protective equipment for firefighters. In case of fire: Wear self-contained breathing apparatus. Evacuate personnel to a safe area.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- For non-emergency personnel : Evacuate personnel to a safe area. Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe vapours/dust. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use only non-sparking tools.

6.1.2. For emergency responders


- For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8.

6.2. Environmental precautions

Do not allow contact with soil, surface or ground water.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Stop leak if safe to do so. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Collect in closed and suitable containers for disposal. Dispose of contaminated materials in accordance with current regulations. Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

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6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Disposal: see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only in well ventilated areas. Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8 . Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe vapours/dust. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Ensure equipment is adequately earthed. Take any precaution to avoid mixing with incompatible materials. See also section 10. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Do not allow to enter into surface water or drains.

Hygiene measures : Keep good industrial hygiene. When using do not eat, drink or smoke. Wash hands before breaks and immediately after using the product. Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Do not store near or with any of the incompatible materials listed in section 10. Maximum storage period (time). 12 months.

Packaging materials : Keep/Store only in original container.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

copper (7440-50-8)		
Austria	MAK (mg/m ³)	1 mg/m ³ (inhalable fraction) 0,1 mg/m ³ (respirable fraction, smoke)
Austria	MAK Short time value (mg/m ³)	4 mg/m ³ (inhalable fraction) 0,4 mg/m ³ (respirable fraction, smoke)
Belgium	Limit value (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Bulgaria	OEL TWA (mg/m ³)	0,1 mg/m ³ (metal vapor)
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust)
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	2 mg/m ³ (dust and fume)
Czech Republic	Expoziční limity (PEL) (mg/m ³)	1 mg/m ³ (dust) 0,1 mg/m ³ (fume)
Denmark	Grænseværdie (langvarig) (mg/m ³)	1,0 mg/m ³ (dust and powder) 0,1 mg/m ³ (fume)
Estonia	OEL TWA (mg/m ³)	1 mg/m ³ (total dust) 0,2 mg/m ³ (respirable dust)
Finland	HTP-arvo (8h) (mg/m ³)	1 mg/m ³ 0,1 mg/m ³ (respirable dust and fume)
France	VME (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust)
France	VLE (mg/m ³)	2 mg/m ³ (dust)
Greece	OEL TWA (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust)



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copper (7440-50-8)

Greece	OEL STEL (mg/m ³)	2 mg/m ³ (dust)
Hungary	AK-érték	1 mg/m ³ 0,1 mg/m ³ (fume)
Hungary	CK-érték	4 mg/m ³ 0,4 mg/m ³ (fume)
Ireland	OEL (8 hours ref) (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Ireland	OEL (15 min ref) (mg/m ³)	0,6 mg/m ³ (calculated-fume) 2 mg/m ³ (dust and mist)
Latvia	OEL TWA (mg/m ³)	0,5 mg/m ³
Lithuania	IPRV (mg/m ³)	1 mg/m ³ (inhalable fraction) 0,2 mg/m ³ (respirable fraction)
Netherlands	Grenswaarde TGG 8H (mg/m ³)	0,1 mg/m ³ (inhalable fraction)
Poland	NDS (mg/m ³)	0,2 mg/m ³
Portugal	OEL TWA (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Romania	OEL TWA (mg/m ³)	0,50 mg/m ³ (powder)
Romania	OEL STEL (mg/m ³)	0,20 mg/m ³ (fume) 1,50 mg/m ³ (dust)
Slovakia	NPHV (priemerná) (mg/m ³)	1 mg/m ³ (dust) 0,1 mg/m ³ (fume)
Slovakia	NPHV (Hraničná) (mg/m ³)	2 mg/m ³ (dust) 0,2 mg/m ³ (fume)
Slovenia	OEL TWA (mg/m ³)	1 mg/m ³ (inhalable fraction) 0,1 mg/m ³ (respirable fraction, fume)
Slovenia	OEL STEL (mg/m ³)	4 mg/m ³ (inhalable fraction) 0,4 mg/m ³ (respirable fraction, fume)
Spain	VLA-ED (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
Sweden	nivågränsvärde (NVG) (mg/m ³)	1 mg/m ³ (total dust) 0,2 mg/m ³ (respirable dust)
United Kingdom	WEL TWA (mg/m ³)	1 mg/m ³ (dust and mists) 0,2 mg/m ³ (fume)
United Kingdom	WEL STEL (mg/m ³)	0,6 mg/m ³ (calculated-fume) 2 mg/m ³ (dust and mist)
Norway	Grenseverdier (AN) (mg/m ³)	0,1 mg/m ³ (fume) 1 mg/m ³ (dust)
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	0,1 mg/m ³ (fume) 1 mg/m ³ (dust)
Switzerland	VME (mg/m ³)	0,1 mg/m ³ (inhalable dust)
Switzerland	VLE (mg/m ³)	0,2 mg/m ³ (inhalable dust)
Australia	TWA (mg/m ³)	1 mg/m ³ (dust and mist) 0,2 mg/m ³ (fume)
Canada (Quebec)	VEMP (mg/m ³)	0,2 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
USA - ACGIH	ACGIH TWA (mg/m ³)	0,2 mg/m ³ (fume)
USA - IDLH	US IDLH (mg/m ³)	100 mg/m ³ (dust, fume and mist)
USA - NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³ (dust and mist) 0,1 mg/m ³ (fume)



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copper (7440-50-8)

USA - OSHA	OSHA PEL (TWA) (mg/m ³)	0,1 mg/m ³ (fume) 1 mg/m ³ (dust and mist)
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2-methylpentane-2,4-diol (107-41-5)

Austria	MAK (mg/m ³)	49 mg/m ³
Austria	MAK (ppm)	10 ppm
Austria	MAK Short time value (mg/m ³)	49 mg/m ³
Austria	MAK Short time value (ppm)	10 ppm
Austria	OEL - Ceilings (mg/m ³)	49 mg/m ³
Austria	OEL - Ceilings (ppm)	10 ppm
Belgium	Limit value (mg/m ³)	123 mg/m ³
Belgium	Limit value (ppm)	25 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	123 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	25 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	123 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	25 ppm
Denmark	Grænseværdie (ceiling) (ppm)	25 ppm
Denmark	Grænseværdie (ceiling) (mg/m ³)	125 mg/m ³
Finland	HTP-arvo (8h) (mg/m ³)	120 mg/m ³
Finland	HTP-arvo (8h) (ppm)	25 ppm
Finland	HTP-arvo (15 min)	200 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	40 ppm
France	VLE (mg/m ³)	125 mg/m ³
France	VLE (ppm)	25 ppm
Greece	OEL TWA (mg/m ³)	125 mg/m ³
Greece	OEL TWA (ppm)	25 ppm
Greece	OEL STEL (mg/m ³)	125 mg/m ³
Greece	OEL STEL (ppm)	25 ppm
Ireland	OEL (15 min ref) (mg/m ³)	125 mg/m ³
Ireland	OEL (15 min ref) (ppm)	25 ppm
Lithuania	NRV (mg/m ³)	120 mg/m ³
Lithuania	NRV (ppm)	25 ppm
Poland	NDSP (mg/m ³)	120 mg/m ³
Portugal	OEL - Ceilings (ppm)	25 ppm
Slovenia	OEL TWA (mg/m ³)	49 mg/m ³
Slovenia	OEL TWA (ppm)	10 ppm
Slovenia	OEL STEL (mg/m ³)	49 mg/m ³
Slovenia	OEL STEL (ppm)	10 ppm
Spain	VLA-EC (mg/m ³)	123 mg/m ³
Spain	VLA-EC (ppm)	25 ppm
Sweden	takgränsvärde (TGV) (mg/m ³)	120 mg/m ³
Sweden	takgränsvärde (TGV) (ppm)	25 ppm
United Kingdom	WEL TWA (mg/m ³)	123 mg/m ³
United Kingdom	WEL TWA (ppm)	25 ppm

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2-methylpentane-2,4-diol (107-41-5)		
United Kingdom	WEL STEL (mg/m ³)	123 mg/m ³
United Kingdom	WEL STEL (ppm)	25 ppm
Norway	Grenseverdier (Takverdi) (mg/m ³)	100 mg/m ³
Norway	Grenseverdier (Takverdi) (ppm)	20 ppm
Switzerland	VME (mg/m ³)	49 mg/m ³
Switzerland	VME (ppm)	10 ppm
Switzerland	VLE (mg/m ³)	98 mg/m ³
Switzerland	VLE (ppm)	20 ppm
Canada (Quebec)	PLAFOND (mg/m ³)	121 mg/m ³
Canada (Quebec)	PLAFOND (ppm)	25 ppm
USA - ACGIH	ACGIH Ceiling (ppm)	25 ppm
USA - NIOSH	NIOSH REL (ceiling) (mg/m ³)	125 mg/m ³
USA - NIOSH	NIOSH REL (ceiling) (ppm)	25 ppm


8.2. Exposure controls

Engineering control measures	: Provide adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use only at a place, which is equipped with a safety shower. Ensure equipment is adequately earthed. Take precautionary measures against static discharges. Organisational measures to prevent /limit releases, dispersion and exposure. See also section 7.
Personal protection equipment	: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hand protection	: The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves. Wear chemically resistant gloves (tested to EN374)
Eye protection	: Wear eye glasses with side protection according to EN 166. tightly fitting safety goggles (EN166)
Body protection	: Wear suitable coveralls to prevent exposure to the skin. Chemical protection clothing. Chemical resistant safety shoes
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (DIN EN 140). Full face mask (EN 136). Filter type: A/P (EN 141)
Thermal hazard protection	: Not required for normal conditions of use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Paste.
Colour	: Copper.
Odour	: Sweet.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point/freezing point	: 1083 °C copper
Freezing point	: No data available

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Initial boiling point and boiling range	: 2597 °C copper
Flash point	: 90 - 93 °C Solvent
Auto-ignition temperature	: 425 °C Solvent
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non-flammable
Vapour pressure	: 0,007 Pa Solvent
Vapour density	: No data available
Relative density	: 4,1 Solvent
Density	: 8,96 g/cm ³ copper
Solubility	: > 0 g/l Solvent. Water: 0 g/l copper
Partition coefficient n-octanol/water	: 0,6 Solvent
Kinematic viscosity	: No data available
Dynamic viscosity	: No data available
Explosive properties	: Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.
Oxidising properties	: Not applicable.
Explosive limits	: 1 - 9,9 vol % Solvent

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal processing. Reference to other sections: 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Reference to other sections: 10.4 & 10.5.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Avoid dust formation. humid air. See also section 7. Handling and storage.

10.5. Incompatible materials

acids and bases. Strong oxidizing agents. See also section 7. Handling and storage.

10.6. Hazardous decomposition products


Reference to other sections: 5.2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.
Coated Copper Flakes :
Harmful if swallowed

ATE CLP (oral)	500 mg/kg bodyweight
2-methylpentane-2,4-diol (107-41-5)	
LD50/oral/rat	> 3500 mg/kg
LD50/dermal/rabbit	> 5000 nl/kg

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Skin corrosion/irritation	: Causes skin irritation. 2-methylpentane-2,4-diol : Causes skin irritation pH: No data available
Serious eye damage/eye irritation	: Causes serious eye irritation. 2-methylpentane-2,4-diol : Causes serious eye irritation pH: No data available
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Other adverse effects	: None.
Other information	: Symptoms related to the physical, chemical and toxicological characteristics. Reference to other sections: 4.2.

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties : Toxic to aquatic life with long lasting effects.

copper (7440-50-8)	
LC50 fish 1	0,0068 - 0,0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	0,03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 other aquatic organisms 1	0,0426 - 0,0535 mg/l (72 h - Pseudokirchneriella subcapitata)
LC50 fish 2	< 0,3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 other aquatic organisms 2	0,031 - 0,054 mg/l (96 h - Pseudokirchneriella subcapitata)

2-methylpentane-2,4-diol (107-41-5)	
LC50 fish 1	(96h) 9450 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 Daphnia 1	5410 mg/l (48h)
LC50 fish 2	(96h) 8690 mg/l Pimephales promelas (fathead minnow)
ErC50 (algae)	(72 h) > 420 mg/l Pseudokirchneriella subcapitata

12.2. Persistence and degradability

COPPER PASTE DI	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential


COPPER PASTE DI	
Partition coefficient n-octanol/water	0,6 Solvent

copper (7440-50-8)	
Partition coefficient n-octanol/water	Not applicable

2-methylpentane-2,4-diol (107-41-5)	
Partition coefficient n-octanol/water	< 0,14

12.4. Mobility in soil

COPPER PASTE DI	
Surface tension	33 mN/m Solvent
Ecology - soil	No data available.

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12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

Additional information : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Handle with care. Safe handling: see section 7. Handling and storage. Collect and dispose of waste product at an authorised disposal facility. Refer to manufacturer/supplier for information on recovery/recycling. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of contaminated materials in accordance with current regulations.



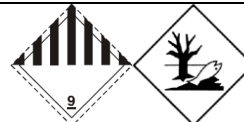
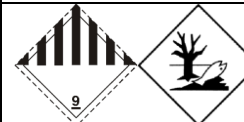
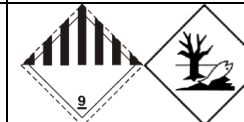
Additional information : Do not puncture or incinerate. Do not burn, or use a cutting torch on, the empty drum. Empty containers should be taken to local recyclers for disposal. If recycling is not practicable, dispose of in compliance with local regulations.


Further ecological information : Do not allow to enter into surface water or drains.

List of proposed waste codes/waste designations in accordance with EWC (2001/573/EC, 75/442/EEC, 91/689/EEC) : Classified as hazardous waste according to European Union regulations
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN


ADR	IMDG	IATA	ADN	RID
14.1. UN number				
3077	3077	3077	3077	3077
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)	Environmentally hazardous substance, solid, n.o.s. (copper)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)
Transport document description				
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper), 9, III, (E)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper), 9, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 3077 Environmentally hazardous substance, solid, n.o.s. (copper), 9, III, ENVIRONMENTALLY HAZARDOUS	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper), 9, III, ENVIRONMENTALLY HAZARDOUS	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper), 9, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
Not applicable				

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14.6. Special precautions for user

Special precautions for user : No data available

- Overland transport


Classification code (ADR) : M7
Special Provisions : 274, 335, 601, 375
Limited quantities (ADR) : 5kg
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P002, IBC08, LP02, R001
Special packing provisions (ADR) : PP12, B3
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T1, BK1, BK2
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAV, LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V13
Special provisions for carriage - Bulk (ADR) : VC1, VC2
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates : 
tunnel restriction code : E
EAC code : 2Z

- Transport by sea

Special provisions (IMDG) : 274, 335, 966, 967, 969
Limited quantities (IMDG) : 5 kg
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P002, LP02
Special packing provisions (IMDG) : PP12
IBC packing instructions (IMDG) : IBC08
IBC special provisions (IMDG) : B3
Tank instructions (IMDG) : T1, BK1, BK2, BK3
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-F
Stowage category (IMDG) : A
Stowage and handling (IMDG) : SW23

- Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y956

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PCA limited quantity max net quantity (IATA) : 30kgG
 PCA packing instructions (IATA) : 956
 PCA max net quantity (IATA) : 400kg
 CAO packing instructions (IATA) : 956
 CAO max net quantity (IATA) : 400kg
 Special provisions (IATA) : A97, A158, A179, A197
 ERG code (IATA) : 9L

- Inland waterway transport

Classification code (ADN) : M7
 Special provisions (ADN) : 274, 335, 375, 601
 Limited quantities (ADN) : 5 kg
 Excepted quantities (ADN) : E1
 Carriage permitted (ADN) : T* B**
 Equipment required (ADN) : PP, A
 Number of blue cones/lights (ADN) : 0

- Rail transport

Classification code (RID) : M7
 Special provisions (RID) : 274, 335, 375, 601
 Limited quantities (RID) : 5kg
 Excepted quantities (RID) : E1
 Packing instructions (RID) : P002, IBC08, LP02, R001
 Special packing provisions (RID) : PP12, B3
 Mixed packing provisions (RID) : MP10
 Portable tank and bulk container instructions (RID) : T1, BK1, BK2
 Portable tank and bulk container special provisions (RID) : TP33
 Tank codes for RID tanks (RID) : SGAV, LGBV
 Transport category (RID) : 3
 Special provisions for carriage – Packages (RID) : W13
 Special provisions for carriage – Bulk (RID) : VC1, VC2
 Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW31
 Colis express (express parcels) (RID) : CE11
 Hazard identification number (RID) : 90

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

Not applicable


SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	2-methylpentane-2,4-diol
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3.b. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	2-methylpentane-2,4-diol
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	COPPER PASTE DI - copper

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

France

No ICPE	Installations classées Désignation de la rubrique	Code Régime	Rayon
1171.text	Dangereux pour l'environnement - A et/ou B -, très toxiques et/ou toxiques pour les organismes aquatiques (fabrication industrielle de substances ou préparations) telles que définies à la rubrique 1000, à l'exclusion de celles visées nominativement ou par famille par d'autres rubriques.		
1171.1a	1. Cas des substances très toxiques pour les organismes aquatiques -A- : La quantité totale susceptible d'être présente dans l'installation étant : a) Supérieure ou égale à 200 t	AS	4
1171.1b	1. Cas des substances très toxiques pour les organismes aquatiques -A- : La quantité totale susceptible d'être présente dans l'installation étant : b) Inférieure à 200 t	A	2
1171.2a	2. Cas des substances toxiques pour les organismes aquatiques -B- : La quantité totale susceptible d'être présente dans l'installation étant : a) Supérieure ou égale 500 t	AS	4
1171.2b	2. Cas des substances toxiques pour les organismes aquatiques -B- : La quantité totale susceptible d'être présente dans l'installation étant : b) Inférieure à 500 t	A	2

Germany

VwVwS Annex reference : Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 4)

German storage class (LGK) : LGK 4.1B - Flammable solids

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

Waterbezwaarlijkheid : 5 - (B) Very toxic to aquatic organisms

SZW-lijst van kankerverwekkende stoffen : None of the components are listed


SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

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Class for fire hazard : Class III-1
Store unit : 50 liter
Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

For the following substances of this preparation a chemical safety assessment has been carried out:

SECTION 16: Other information

Indication of changes:

Revision - See : * 2,3,14,15.

Abbreviations and acronyms:


	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	TWA = time weighted average
	STEL = Short term exposure limit
	PBT = persistent, bioaccumulating and toxic (PBT).
	vPvB = very persistent and very bioaccumulating
	EWC = European waste catalogue
	NA = Not applicable
	LC50 = Median lethal concentration
	LD50 = Median lethal dose
	EC50 = Median Effective Concentration
	N.O.S. = Not Otherwise Specified
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

Sources of key data used to compile the datasheet : European Metal Particulate Association (EMPA) Supplier SDS.

Training advice : Training staff on good practice.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Aquatic Acute 1
Aquatic Chronic 2	Hazardous to the aquatic environment - chronic hazard category 2
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Sol. 1	Flammable solids, Hazard Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H228	Flammable solid.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

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