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

1.1. Product identifier

Trade name/designation : Colour Paste Gold

Product code : 48450

Custom Tariff Code : 3212 9000

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

Main use category : Industrial uses,Professional uses.

1.3. Details of the supplier of the safety data sheet

Company :

EXAGON AG
Räffelstrasse 10
8045 Zürich
Telephone +41 44 430 36 76
E-mail: info@exagon.ch
Website: www.exagon.ch

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification according to Regulation (EU) 1272/2008

CLP-Classification : The product is classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

Aquatic Acute 1 H400
Aquatic Chronic 1 H410

Full text of H-phrases: see section 16

2.1.2. Classification according to EU Directives 67/548/EEC or 1999/45/EC

Classification : This mixture is classified as hazardous according to 1999/45/EC.

N; R50/53

Full text of R-phrases: see section 16

2.2. Label elements

2.2.1. Labelling according to Regulation (EU) 1272/2008

Hazard pictograms :

GHS09

Signal word : Warning
Hazard statements : H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements : P273 - Avoid release to the environment.
P391 - Collect spillage.

2.2.2. Labelling according to Directives (67/548 - 1999/45)

Not relevant

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. Substances

Not applicable

3.2. Mixtures

Substance name	Product identifier	%	Classification according to Directive 67/548/EEC
copper	(CAS No.) 7440-50-8 (EC No) 231-159-6 (REACH-no) 01-2119480154-42-XXXX	56 - 76,5	N; R50 R53
Zinc	(CAS No.) 7440-66-6 (EC No) 231-175-3 (EC Index) 030-001-01-9 (REACH-no) 01-2119467174-37-XXXX	8 - 25,5	N; R50/53
[2-(2-methoxymethylethoxy)methylethoxy]propanol	(CAS No.) 25498-49-1 (EC No) 247-045-4 (REACH-no) 01-2119450087-41-XXXX	12,4 - 17,6	Not classified
xylene	(CAS No.) 1330-20-7 (EC No) 215-535-7 (EC Index) 601-022-00-9	2,4 - 2,6	R10 Xn; R20/21 Xi; R38

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	56 - 76,5	Aquatic Acute 1, H400 (M=10) Aquatic Chronic 3, H412
Zinc	(CAS No.) 7440-66-6 (EC No) 231-175-3 (EC Index) 030-001-01-9 (REACH-no) 01-2119467174-37-XXXX	8 - 25,5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
[2-(2-methoxymethylethoxy)methylethoxy]propanol	(CAS No.) 25498-49-1 (EC No) 247-045-4 (REACH-no) 01-2119450087-41-XXXX	12,4 - 17,6	Not classified
xylene	(CAS No.) 1330-20-7 (EC No) 215-535-7 (EC Index) 601-022-00-9	2,4 - 2,6	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation : Provide fresh air.
Keep at rest.
When in doubt or if symptoms are observed, get medical advice.

Skin contact : Remove contaminated clothing and shoes.
Wash with plenty of water/.
When in doubt or if symptoms are observed, get medical advice.
Wash contaminated clothing before reuse.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
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.

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.
When in doubt or if symptoms are observed, get medical advice.
Never give anything by mouth to an unconscious person or a person with cramps.

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

Inhalation : Inhalation of dust may cause irritation of the respiratory system. The following symptoms may occur: Cough, Drowsiness, Headache, sore throat.

Skin contact : May be irritating.

Eye contact : Dust contact with the eyes can lead to mechanical irritation. The following symptoms may occur: erythema (redness), Pain.

Ingestion : May be irritating.

Other adverse effects : none.

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 : Foam, ABC-powder, Carbon dioxide, Dry sand

Extinguishing media which must not be used for safety reasons : Water

5.2. Special hazards arising from the substance or mixture

Fire hazard : Non-flammable.

Specific hazards : Vapours can form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Beware of reignition.
The pressure in sealed containers can increase under the influence of heat.
Burning produces noxious and toxic fumes.
Hazardous decomposition products Carbon oxides, metal oxides
Do not allow run-off from fire-fighting to enter drains or water courses.
Dispose according to legislation.

5.3. Advice for firefighters

Advice for firefighters : Special protective equipment for firefighters.
In case of fire: Wear self-contained breathing apparatus.
Use water spray jet to protect personnel and to cool endangered containers.
Evacuate area.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Evacuate area.
Provide adequate ventilation.
Use personal protective equipment as required.
Personal protection equipment: see section 8
Avoid contact with skin, eyes and clothes.
Avoid generation of dust.
Do not breathe vapours/dust.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place.
Personal protection equipment: see section 8.

6.2. Environmental precautions

Environmental precautions : Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so.
Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Collect in closed and suitable containers for disposal.
Dispose according to legislation.
Site should have a spill plan to ensure that adequate safeguards are in place to minimize the impact of episodic releases.

6.4. Reference to other sections

Personal protection equipment: see section 8
Disposal: see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling : Use only in well-ventilated areas.
Provide adequate ventilation.
Use personal protective equipment as required.
Personal protection equipment: see section 8 .
Avoid contact with skin, eyes and clothes.
Avoid generation of dust.
Do not breathe vapours/dust.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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.

Advices on general occupational hygiene : 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

Storage : Flammable solids
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.
Protect from moisture.
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

Exposure limit values :

copper (7440-50-8)		
Austria	MAK (mg/m³)	1 mg/m³ (inhalable fraction) 0,1 mg/m³ (respirable fraction, smoke)
Austria	MAK Short time value (mg/m³)	4 mg/m³ (inhalable fraction) 0,4 mg/m³ (respirable fraction, smoke)
Belgium	Limit value (mg/m³)	0,2 mg/m³ (fume) 1 mg/m³ (dust and mist)
Bulgaria	OEL TWA (mg/m³)	0,1 mg/m³ (metal vapor)
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	0,2 mg/m³ (fume) 1 mg/m³ (dust)
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	2 mg/m³ (dust and fumes)
France	VLE (mg/m³)	2 mg/m³ (dust)
France	VME (mg/m³)	0,2 mg/m³ (fume) 1 mg/m³ (dust)
Greece	OEL TWA (mg/m³)	0,2 mg/m³ (fume) 1 mg/m³ (dust)
Greece	OEL STEL (mg/m³)	2 mg/m³ (dust)
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m³)	0,2 mg/m³ (fume)
Latvia	OEL TWA (mg/m³)	0,5 mg/m³
Spain	VLA-ED (mg/m³)	0,2 mg/m³ (fume) 1 mg/m³ (dust and mist)
Switzerland	VLE (mg/m³)	0,2 mg/m³ (inhalable)
Switzerland	VME (mg/m³)	0,1 mg/m³ (inhalable)
Netherlands	Grenswaarde TGG 8H (mg/m³)	0,1 mg/m³ (inhalable fraction)
United Kingdom	WEL TWA (mg/m³)	1 mg/m³ (dust and mists) 0,2 mg/m³ (fume)
United Kingdom	WEL STEL (mg/m³)	0,6 mg/m³ (calculated-fume) 2 mg/m³ (dust and mist)

Czech Republic	Expoziční limity (PEL) (mg/m³)	1 mg/m³ (dust) 0,1 mg/m³ (fume)
Denmark	Grænseværdie (langvarig) (mg/m³)	1,0 mg/m³ (dust and powder) 0,1 mg/m³ (fume)
Finland	HTP-arvo (8h) (mg/m³)	1 mg/m³ 0,1 mg/m³ (respirable dust and fume)
Hungary	AK-érték	1 mg/m³ 0,1 mg/m³ (fume)
Hungary	CK-érték	4 mg/m³ 0,4 mg/m³ (fume)
Ireland	OEL (8 hours ref) (mg/m³)	0,2 mg/m³ (fume) 1 mg/m³ (dust and mist)
Ireland	OEL (15 min ref) (mg/m3)	0,6 mg/m³ (calculated-fume) 2 mg/m³ (dust and mist)
Lithuania	IPRV (mg/m³)	1 mg/m³ (inhalable fraction) 0,2 mg/m³ (respirable fraction)
Norway	Gjennomsnittsverdier (AN) (mg/m³)	0,1 mg/m³ (fume) 1 mg/m³ (dust)
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m3)	0,3 mg/m³ (fume) 3 mg/m³ (dust)
Poland	NDS (mg/m³)	0,2 mg/m³
Romania	OEL TWA (mg/m³)	0,50 mg/m³ (powder)
Romania	OEL STEL (mg/m³)	0,20 mg/m³ (fume) 1,50 mg/m³ (dust)
Slovakia	NPHV (priemerná) (mg/m³)	1 mg/m³ (dust) 0,1 mg/m³ (fume)
Slovakia	NPHV (Hraničná) (mg/m³)	2 mg/m³ (dust) 0,2 mg/m³ (fume)
Sweden	nivågränsvärde (NVG) (mg/m³)	1 mg/m³ (total dust) 0,2 mg/m³ (respirable dust)

Zinc (7440-66-6)		
Switzerland	VLE (mg/m³)	0,4 mg/m³ (respirable)
Switzerland	VME (mg/m³)	0,1 mg/m³ (respirable) 2 mg/m³ (inhalable)

xylene (1330-20-7)		
EU	IOELV TWA (mg/m³)	221 mg/m³ (pure)
EU	IOELV TWA (ppm)	50 ppm (pure)
EU	IOELV STEL (mg/m³)	442 mg/m³ (pure)
EU	IOELV STEL (ppm)	100 ppm (pure)
Austria	MAK (mg/m³)	221 mg/m³ (all isomers)
Austria	MAK (ppm)	50 ppm (all isomers)
Austria	MAK Short time value (mg/m³)	442 mg/m³ (all isomers)
Austria	MAK Short time value (ppm)	100 ppm (all isomers)
Belgium	Limit value (mg/m³)	221 mg/m³
Belgium	Limit value (ppm)	50 ppm
Belgium	Short time value (mg/m³)	442 mg/m³
Belgium	Short time value (ppm)	100 ppm
Bulgaria	OEL TWA (mg/m³)	221,0 mg/m³ (pure)
Bulgaria	OEL TWA (ppm)	50 ppm (pure)
Bulgaria	OEL STEL (mg/m³)	442 mg/m³ (pure)

xylene (1330-20-7)		
Bulgaria	OEL STEL (ppm)	100 ppm (pure)
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	221 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	50 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	442 mg/m³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	100 ppm
Cyprus	OEL TWA (mg/m³)	221 mg/m³
Cyprus	OEL TWA (ppm)	50 ppm
Cyprus	OEL STEL (mg/m³)	442 mg/m³
Cyprus	OEL STEL (ppm)	100 ppm
France	VLE (mg/m³)	442 mg/m³ (restrictive limit)
France	VLE (ppm)	100 ppm (restrictive limit)
France	VME (mg/m³)	221 mg/m³ (restrictive limit)
France	VME (ppm)	50 ppm (restrictive limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	440 mg/m³ (all isomers)
Germany	TRGS 900 Occupational exposure limit value (ppm)	100 ppm (all isomers)
Germany	TRGS 903 (BGW)	1,5 mg/l (Medium: whole blood - Time: end of shift - Parameter: Xylene (all isomers) 2000 mg/l (Medium: urine - Time: end of shift - Parameter: Methylhippuric(tolur-)acid (all isomers)
Gibraltar	OEL TWA (mg/m³)	221 mg/m³ (pure)
Gibraltar	OEL TWA (ppm)	50 ppm (pure)
Gibraltar	OEL STEL (mg/m³)	442 mg/m³ (pure)
Gibraltar	OEL STEL (ppm)	100 ppm (pure)
Greece	OEL TWA (mg/m³)	435 mg/m³
Greece	OEL TWA (ppm)	100 ppm
Greece	OEL STEL (mg/m³)	650 mg/m³
Greece	OEL STEL (ppm)	150 ppm
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	100 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	150 ppm
Italy	OEL TWA (mg/m³)	221 mg/m³ (pure)
Italy	OEL TWA (ppm)	50 ppm (pure)
Italy	OEL STEL (mg/m³)	442 mg/m³ (pure)
Italy	OEL STEL (ppm)	100 ppm (pure)
Latvia	OEL TWA (mg/m³)	221 mg/m³
Latvia	OEL TWA (ppm)	50 ppm
Spain	VLA-ED (mg/m³)	221 mg/m³ (indicative limit value)
Spain	VLA-ED (ppm)	50 ppm (indicative limit value)
Spain	VLA-EC (mg/m³)	442 mg/m³
Spain	VLA-EC (ppm)	100 ppm
Switzerland	VLE (mg/m³)	870 mg/m³
Switzerland	VLE (ppm)	200 ppm
Switzerland	VME (mg/m³)	435 mg/m³
Switzerland	VME (ppm)	100 ppm

xylene (1330-20-7)		
Netherlands	Grenswaarde TGG 8H (mg/m³)	210 mg/m³
Netherlands	Grenswaarde TGG 15MIN (mg/m³)	442 mg/m³
United Kingdom	WEL TWA (mg/m³)	220 mg/m³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m³)	441 mg/m³
United Kingdom	WEL STEL (ppm)	100 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	200 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	109 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	25 ppm
Finland	HTP-arvo (8h) (mg/m³)	220 mg/m³
Finland	HTP-arvo (8h) (ppm)	50 ppm
Finland	HTP-arvo (15 min)	440 mg/m³
Finland	HTP-arvo (15 min) (ppm)	100 ppm
Hungary	AK-érték	221 mg/m³
Hungary	CK-érték	442 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	221 mg/m³
Ireland	OEL (8 hours ref) (ppm)	50 ppm
Ireland	OEL (15 min ref) (mg/m3)	442 mg/m³
Ireland	OEL (15 min ref) (ppm)	100 ppm
Lithuania	IPRV (mg/m³)	200 mg/m³
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m³)	450 mg/m³
Lithuania	TPRV (ppm)	100 ppm
Malta	OEL TWA (mg/m³)	221 mg/m³ (pure)
Malta	OEL TWA (ppm)	50 ppm (pure)
Malta	OEL STEL (mg/m³)	442 mg/m³ (pure)
Malta	OEL STEL (ppm)	100 ppm (pure)
Norway	Gjennomsnittsverdier (AN) (mg/m³)	108 mg/m³
Norway	Gjennomsnittsverdier (AN) (ppm)	25 ppm
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m3)	135 mg/m³
Norway	Gjennomsnittsverdier (Korttidsverdi) (ppm)	37,5 ppm
Poland	NDS (mg/m³)	100 mg/m³
Romania	OEL TWA (mg/m³)	221 mg/m³
Romania	OEL TWA (ppm)	50 ppm
Romania	OEL STEL (mg/m³)	442 mg/m³
Romania	OEL STEL (ppm)	100 ppm
Slovakia	NPHV (priemerná) (mg/m³)	221 mg/m³
Slovakia	NPHV (priemerná) (ppm)	50 ppm
Slovakia	NPHV (Hraničná) (mg/m³)	442 mg/m³
Sweden	nivågränsvärde (NVG) (mg/m³)	221 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	442 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	100 ppm

Recommended monitoring procedures : Concentration measurement in air
Personal air monitoring

8.2. Exposure controls

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.
Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (DIN EN 140) (EN 140) Full face mask (EN 136) (EN 136) Filter type: A/P (EN 141)
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.,Breakthrough time (maximum wearing time) : >480 ',Wear chemically resistant gloves (tested to EN374) .,NBR (Nitrile rubber),,Neoprene .
Eye protection	:	Tightly fitting safety goggles (EN166). Wear eye glasses with side protection according to EN 166.
Body protection	:	Wear suitable protective clothing. Chemical resistant safety shoes Wear suitable coveralls to prevent exposure to the skin.
Thermal hazard protection	:	Not required under normal use.
Engineering control measures	:	Provide adequate ventilation. Use only in area provided with appropriate exhaust ventilation. A washing facility/water for eye and skin cleaning purposes should be present. Ensure that the equipment is adequately grounded. Take precautionary measures against static discharges. Organisational measures to prevent/limit releases, dispersion and exposure See also section 7
Environmental exposure controls	:	Do not allow to enter into surface water or drains. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	:	Paste
Colour	:	bronze
Odour	:	Ether
Odour threshold:	:	No data available
Odour threshold:	:	No data available
pH	:	Not applicable
Melting point/freezing point	:	850 °C bronze
Freezing point	:	< 20 °C Xylene
Initial boiling point and boiling range	:	2300 °C bronze
Flash point	:	182 °C Xylene (CC) 124 °C [2-(2-methoxymethylethoxy)methylethoxy]propanol
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Non-flammable.
Upper/lower flammability or explosive limits	:	LEL: 0.8- UEL: 8.5 vol % [2-(2-methoxymethylethoxy)methylethoxy]propanol

Vapour pressure	:	1 mmHg [2-(2-methoxymethylethoxy)methylethoxy]propanol
Vapour density	:	Relative vapour density at 20 °C (air=1) 7,15 [2-(2-methoxymethylethoxy)methylethoxy]propanol
Density	:	7,14 - 8,96 g/cm³ bronze
Relative density	:	0,965 [2-(2-methoxymethylethoxy)methylethoxy]propanol
Water solubility	:	0 % bronze 0 % Xylene 100 % [2-(2-methoxymethylethoxy)methylethoxy]propanol
Solubility in different media	:	Xylene
Partition coefficient n-octanol/water	:	0,31 [2-(2-methoxymethylethoxy)methylethoxy]propanol
Auto-ignition temperature	:	277 °C [2-(2-methoxymethylethoxy)methylethoxy]propanol
Decomposition temperature	:	No data available
Viscosity	:	Dynamic viscosity (25°C) 5,5 mPa.s [2-(2-methoxymethylethoxy)methylethoxy]propanol
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 The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.

9.2. Other information

Other information	:	(Apparent) Density : 0,5 - 1,4 g/cm³ @ 20°C

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	:	None under normal conditions Reference to other sections: 10.5

10.2. Chemical stability

Stability	:	The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	:	Vapours can form explosive mixtures with air. Reference to other sections: 10.4 & 10.5

10.4. Conditions to avoid

Conditions to avoid	:	Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Avoid generation of dust. See also section 7 Handling and storage

10.5. Incompatible materials

Incompatible materials	:	Acids and bases ., Oxidising substances ., Halogens, Halogenated compounds (Cl)., See also section 7, Handling and storage

10.6. Hazardous decomposition products

Hazardous decomposition products	:	Hazardous decomposition products formed under fire conditions. Reference to other sections: 5.2

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met.)

Zinc (7440-66-6)	
LD50/oral/rat	2000 mg/kg (OECD 401)
LC50/inhalation/4h/rat	> 5,41 mg/m³ (OECD 403)
ATE CLP (oral)	2000 mg/kg bodyweight

[2-(2-methoxymethylethoxy)methylethoxy]propanol (25498-49-1)	
LD50/oral/rat	3500 mg/kg
LD50/dermal/rabbit	15440 mg/kg

xylene (1330-20-7)	
LD50/oral/rat	3500 mg/kg
LD50/dermal/rabbit	> 4350 mg/kg
LC50/inhalation/4h/rat	29,08 mg/l/4h
ATE CLP (oral)	3500 mg/kg bodyweight
ATE CLP (dermal)	1100 mg/kg bodyweight
ATE CLP (gases)	4500,000 ppmv/4h
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	1,5 mg/l/4h

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met.)
pH: Not applicable

Serious eye damage/eye irritation : Not classified (Based on available data, the classification criteria are not met.)
pH: Not applicable

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 information

Symptoms related to the physical, chemical and toxicological characteristics,Reference to other sections: 4.2

SECTION 12: Ecological information

12.1. Toxicity

Toxicity : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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])
LC50 fish 2	< 0,3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 72h Algae [mg/l] (1)	0,0426 - 0,0535 mg/l (Species: Pseudokirchneriella subcapitata [static])
EC50 96h Algae [mg/l] (1)	0,031 - 0,054 mg/l (Species: Pseudokirchneriella subcapitata [static])

Zinc (7440-66-6)	
LC50 fish 1	439 µg/l Cottus bairdii (pH 6-6.5) 780 µg/l Pimephales promelas (fathead minnow) (pH 7-7.5) 330 µg/l Pimephales promelas (fathead minnow) (pH 8- 8.5) 500 µg/l Pimephales promelas (fathead minnow)
EC50 Daphnia 1	2909 - 2140 µg/l (OECD 202)
EC50 other aquatic organisms 1	(OECD 202) 0,937 mg/l Poecilia reticulata (Guppy) (OECD 202) 0,416 mg/l Ceriodaphnia Dubia (water flea)
EC50 72h Algae [mg/l] (1)	0,09 - 0,125 mg/l (Species: Pseudokirchneriella subcapitata [static])
EC50 96h Algae [mg/l] (1)	0,11 - 0,271 mg/l (Species: Pseudokirchneriella subcapitata [static])
LOEC (chronic)	240 µg/L Pimephales promelas (fathead minnow)
NOEC chronic fish	(30d) 169 µg/L Cottus bairdii
Additional information	NOEC, aquatic invertebrates, long term, Ceriodaphnia Dubia (water flea): 25 µg/L (7 days, freshwater) NOEC, aquatic invertebrates, long term, Daphnia magna (Big water flea): 100 µg/L (3 weeks, freshwater) NOEC, aquatic invertebrates, long term, Mytilus edulis: 75 µg/L (3 days, freshwater) NOEC, aquatic algae, Pseudokirchneriella subcapitata: 24 µg/L (72 hours, OECD 201) LOAEC, aquatic algae, Nitzschia closterium: 20 µg/L (4 days)

[2-(2-methoxymethylethoxy)methylethoxy]propanol (25498-49-1)	
LC50 fish 1	(96h) 11619 mg/l Pimephales promelas (fathead minnow)

xylene (1330-20-7)	
LC50 fish 1	13,4 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3,82 mg/l (Exposure time: 48 h - Species: water flea)
LC50 fish 2	2,661 - 4,093 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. Persistence and degradability

Persistence and degradability : Solvent
Readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation : No data available
Partition coefficient n-octanol/water : 0,31 [2-(2-methoxymethylethoxy)methylethoxy]propanol

12.4. Mobility in soil

Mobility : No data available

12.5. Results of PBT and vPvB assessment

PBT/vPvB data : 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

12.6. Other adverse effects

Other information : very bioaccumulating (vPvB).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product waste: : 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 according to legislation.

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

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

List of proposed waste codes/waste designations in accordance with EWC : 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

14.1. UN number

UN number : 3077

14.2. UN proper shipping name

Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Zinc Copper)
Proper shipping name IATA/IMDG : FLAMMABLE SOLID, INORGANIC, N.O.S. (Copper/Zinc)

14.3. Transport hazard class(es)

14.3.1. Overland transport

Class(es) : 9 - Miscellaneous dangerous substances and articles
Hazard identification number (Kemler No.) : 90
Classification code : M7
ADR/RID-Labels : 9 - Miscellaneous dangerous substances and articles

14.3.2. Inland waterway transport (ADN)

Class (UN) : 9

14.3.3. Transport by sea

Class or Division : 9 - Miscellaneous dangerous substances and articles

14.3.4. Air transport

Class or Division : 9 - Miscellaneous dangerous substances and articles

14.4. Packing group

Packing group : III

14.5. Environmental hazards

Environmental hazards : N

Other information : No supplementary information available.

14.6 Special precautions for user No data available

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

No data available

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	:	xylene
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.	:	BRONZE PASTE PGE8B - xylene
This product contains an ingredient according to the candidate list of Annex XIV of the REACH Regulation 1907/2006/EC.	:	None
Authorisations	:	Not applicable

15.1.2. National regulations

DE :	WGK	:	2
DE :	German storage class (LGK)	:	LGK 4.1B - Flammable solids
DE :	Technische Regeln für Gefahrstoffe (TRGS)	:	applicable
FR :	Installations classées	:	1450;117x
NL :	ABM	:	4 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. A/B

15.2. Chemical safety assessment

Chemical Safety Assessment : For the following substances of this preparation a chemical safety assessment has been carried out:
Copper
Zinc
1-methoxy-2-propanol

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Dermal)	:	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	:	Acute toxicity (inhal.), Category 4
Aquatic Acute 1	:	Hazardous to the aquatic environment - Aquatic Acute 1
Aquatic Chronic 1	:	Hazardous to the aquatic environment - chronic hazard category 1
Aquatic Chronic 3	:	Hazardous to the aquatic environment - chronic hazard category 3
Flam. Liq. 3	:	Flammable liquids, Category 3
Skin Irrit. 2	:	Skin corrosion/irritation, Category 2
H226	:	Flammable liquid and vapour.
H312	:	Harmful in contact with skin.
H315	:	Causes skin irritation.
H332	:	Harmful if inhaled.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.
R10	:	Flammable.
R20/21	:	Harmful by inhalation and in contact with skin.
R38	:	Irritating to skin.
R50	:	Very toxic to aquatic organisms.
R50/53	:	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	:	May cause long-term adverse effects in the aquatic environment.
N	:	Dangerous for the environment
Xi	:	Irritant
Xn	:	Harmful

Key literature references and sources for data : European Metal Particulate Association (EMPA)
Supplier SDS

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)

The contents and format of this SDS are in accordance with EEC Commission Directive 1999/45/EC, 67/548/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

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