READY MIX BRONZE

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1 IDENTIFICATION OF THE SUBSTANCE OR THE MIXTURE AND OF THE COMPANY OR THE UNDERTAKING.

1.1 Product identifier.

Product name:	READY MIX BRONZE

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

Decorative bronze-effect coating.

Uses advised against:

Any use not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet.

Company:	**SATINE FACTORY S.L**
Address:	C/ Coure 16-24
Town:	12530 - Burriana
Province:	Castellón
Telephone:	964100100
Fax:	692100100
E-mail:	info@satine.es
Web:	www.satine.com

1.4 Emergency telephone number:

(Monday-Friday; 08:00-14:00) +34 692 100 100

2 HAZARDS IDENTIFICATION.

2.1 Classification of the substance or mixture.

The product is classified as hazardous under the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adaptations). The product therefore requires a safety data sheet in accordance with Regulation (EU) 2020/878.

Any additional information on health and/or environmental hazards is given in sections 11 and 12 of this sheet.

Classification and hazard statements:

Physicochemical hazards: the product is not classified for this hazard class.

Health hazards: the product is not classified for this hazard class.

Environmental hazards: the product is very toxic to aquatic organisms with long-lasting effects.

Hazardous to the aquatic environment, acute toxicity, category 1 H400 Very toxic to aquatic life.

Hazardous to the aquatic environment, chronic toxicity, category 2 H411 Toxic to aquatic life with long-lasting effects.

2.2 Label elements. Labelling according to Regulation (EC) No 1272/2008:

Hazard labelling in accordance with Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adaptations.

Hazard pictograms:

Signal word: Warning

Hazard statements:

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long-lasting effects.

Precautionary statements:

P273 Avoid release to the environment.

P391 Collect spillage.

2.3 Other hazards.

According to the available data, the product does not contain PBT or vPvB substances in a proportion ≥ 0.1%.

The product does not contain substances with endocrine-disrupting properties in a concentration ≥ 0.1%.

3 COMPOSITION/INFORMATION ON INGREDIENTS.

3.2 Mixtures

Contains:

Identification	Concentration %	Classification 1272/2008 (CLP)	Specific limits 1272/2008 (CLP)
Copper			
Index: - EC 231-159-6 CAS 7440-50-8 REACH Reg. 01-2119480154-42-XXXX	62 - 98	Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411	*Not applicable*
Tin			
Index: - EC 231-141-8 CAS 7440-31-5	0.30 - 38	Substance with a Community workplace exposure limit.	*Not applicable*

4 FIRST-AID MEASURES

4.1 Description of first aid measures

No incidents of harm to personnel using the product are known. If necessary, the following

general measures should be taken:

INHALATION: Take the person into the open air. If breathing stops, give artificial respiration. Consult a doctor immediately.

INGESTION: Consult a doctor immediately. Induce vomiting only on medical advice. Do not give anything by mouth if the person is unconscious.

EYES and SKIN: Wash with plenty of water. If irritation persists, consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

No specific information is available on the symptoms and effects caused by the product.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Consult a doctor.

5 FIREFIGHTING MEASURES

5.1 Extinguishing media

SUITABLE EXTINGUISHING MEDIA

The extinguishing media are the conventional ones: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING MEDIA

None in particular.

5.2 Special hazards arising from the substance or mixture

HAZARDS FROM EXPOSURE IN THE EVENT OF FIRE

Avoid breathing combustion products, especially copper and tin compounds.

When dusts are dispersed in the air in sufficient concentrations and in the presence of an ignition source, they may form explosive mixtures with air. Fire may develop or be further fed by the solid, possibly through leakage from the container, when it reaches high temperatures or comes into contact with ignition sources.

5.3 Advice for firefighters

GENERAL INFORMATION

Cool containers with water jets to prevent decomposition of the product and the formation of substances potentially hazardous to health. Always wear full fire-protection equipment. Collect extinguishing water, which must not be discharged into the sewer system.

Dispose of contaminated extinguishing water and fire residues in accordance with current regulations.

EQUIPMENT

Standard firefighting clothing, such as an open-circuit self-contained breathing apparatus (EN 137), fire-resistant suit (EN 469), fire-resistant gloves (EN 659) and firefighter boots (HO A29 or A30).

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

FOR NON-EMERGENCY PERSONNEL

Alert the personnel responsible for dealing with such emergencies. Move away from the accident area if the personal protective equipment specified in section 8 is not available.

FOR EMERGENCY RESPONDERS

Remove all personnel not adequately equipped to deal with the emergency.

Wear suitable personal protective equipment, as described in section 8 of the safety data sheet, to avoid contamination of the skin, eyes and personal clothing. Stop the leak if there is no danger.

Allow workers into the area affected by the accident only once it has been properly cleared. Ventilate the premises affected by the accident.

6.2 Environmental precautions

Prevent the product from entering sewers, surface water and groundwater.

6.3 Methods and material for containment and cleaning up

Collect the spilled product and place it in containers for recovery or disposal. Wash away the residue with water jets if there are no contraindications.

Ensure sufficient ventilation of the area affected by the leak. Assess the compatibility of the container to be used with the product by checking section 10. Contaminated material must be disposed of in accordance with the provisions of section 13.

6.4 Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle the product only after consulting all the other sections of this safety data sheet. Avoid releasing the product into the environment. Do not eat, drink or smoke during use. Wash hands after use.

7.2 Conditions for safe storage, including any incompatibilities

Keep the product in clearly labelled containers. Keep containers closed, in a well-ventilated place, protected from direct sunlight. Keep away from incompatible materials, such as acids, bases and strong oxidising agents.

7.3 Specific end use(s)

No specific end uses other than the relevant uses identified in section 1.2 of this safety data sheet are foreseen.

8 INDIVIDUAL EXPOSURE CONTROLS

8.1 Control parameters

It is recommended to take into account, in the risk assessment process, the occupational exposure limit values set by ACGIH for particulates

not otherwise classified (respirable fraction PNOC: 3 mg/m^3; inhalable fraction PNOC: 10 mg/m^3). If these limits are exceeded, the use of a type P filter is recommended, whose class (1, 2 or 3) must be chosen according to the result of the risk assessment

For the substances mentioned in this section, DNEL/PNEC values are also given (although the corresponding REACH registration numbers are not available for these substances) in order to convey as much information as possible to allow the identification and application of appropriate risk management measures.

Regulatory references:

EU	OEL EU	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2023

Tin

Threshold limit value

Type	State	TWA/8h mg/m³ · ppm	STEL/15min mg/m³ · ppm	Notes / Remarks	Critical effects
OEL *(Tin, inorganic compounds as Sn)*	EU	2			
TLV-ACGIH *Tin [7440-31-5] and inorganic compounds [18282-10-5; 21651-19-4], excluding tin hydride and indium tin oxide, as Sn*		2			Pneumoconiosis

Health - Derived No Effect Level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				5 mg/kg bw/d				
Inhalation				17 mg/m³				71 mg/m³
Dermal				80 mg/kg bw/d				10 mg/kg bw/d

Copper

Threshold limit value

Type	State	TWA/8h mg/m³ · ppm	STEL/15min mg/m³ · ppm	Notes / Remarks
TLV-ACGIH *Fumes, as Cu*		0.2		Irritation; Measured by vertical elutriator, cotton dust sampler, inhalable particles; metal fume fever
TLV-ACGIH *Dusts and mists, as Cu*		1		Irritation; Measured by vertical elutriator, cotton dust sampler, inhalable particles; metal fume fever

Predicted No-Effect Concentration in the environment - PNEC

Reference value in fresh water	6.3	µg/L
Reference value in marine water	5.2	µg/L
Reference value for fresh water sediment	87	mg/kg/d
Reference value for marine water sediment	676	mg/kg/d
Reference value for STP microorganisms	230	µg/L
Reference value for the terrestrial compartment	65	mg/kg/d

Health - Derived No Effect Level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				0.041 mg/kg bw/d				
Inhalation	1 mg/m³		1 mg/m³		1 mg/m³		1 mg/m³	
Dermal		273 mg/kg		137 mg/kg		273 mg/kg		137 mg/kg

Legend:

(C) = CEILING; INHAL = Inhalable fraction; RESP = Respirable fraction; THORAC = Thoracic fraction.

VND = hazard identified but no DNEL/PNEC available; NEA = no exposure expected; NPI = no hazard identified; LOW = low hazard; MED = medium hazard; HIGH = high hazard.

Tin
Sampling methods: https://amcaw.ifa.dguv.de/substance/methoden/077-L-Tin.pdf
Copper
Sampling methods: https://amcaw.ifa.dguv.de/substance/methoden/084-L-Copper.pdf

8.2 Exposure controls

Observe the usual safety measures when handling chemical substances.

HAND PROTECTION

Protect hands with category III work gloves, type C (see standard EN 374).

The final choice of work glove material must also take into account the process in which the product is used and any additional products resulting from it. It should also be borne in mind that latex gloves may cause sensitisation.

SKIN PROTECTION

Wear long-sleeved work clothing and category III safety footwear for professional use (see Reg. (EU) 2016/425 and standard EN ISO 20344).

Wash with soap and water after removing protective clothing.

EYE PROTECTION

The use of protective goggles, preferably tight-fitting, is recommended (see standard EN 166).

If there is a risk of exposure to splashes or aerosols in connection with the work being carried out, adequate protection of the mucous membranes (mouth, nose, eyes) must be provided to avoid accidental absorption.

RESPIRATORY PROTECTION

The use of a type P filtering mask is recommended, whose class (1, 2 or 3) and actual necessity must be defined according to the result of the risk assessment (see standard EN 149).

ENVIRONMENTAL EXPOSURE CONTROLS

Emissions from production processes, including those from ventilation equipment, must be monitored to ensure compliance with environmental protection legislation.

Product residues must not be discharged uncontrolled into drains or watercourses.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Properties	Value	Information
Physical state	Powder	
Colour	Red, reddish-brown, yellow	
Odour	Odourless	
Melting/freezing point	Not available	
Initial boiling point	Not available	
Flammability	Not available	
Lower explosive limit	Not applicable	The product is a solid
Upper explosive limit	Not applicable	The product is a solid
Flash point	Not applicable	The product is a solid
Auto-ignition temperature	Not applicable	The product is a solid
Decomposition temperature	Not available	
pH	Not applicable	The product is insoluble in water
Kinematic viscosity	Not applicable	The product is a solid
Solubility	Insoluble in water	
Partition coefficient: n-octanol/water	Not applicable	The product is a mixture
Vapour pressure	Not available	

Density and/or relative density

Product name	Apparent density	Product name	Apparent density
100 Mesh	2.50 ± 0.50	W 36	2.80 ± 0.30
200 Mesh	2.50 ± 0.50	PMX 511	3.10 ± 0.20
CuSn10 <710	3.00 - 4.50	PMX 513	2.85 ± 0.15
WR 350	2.75 ± 0.15	PMX 515	2.50 ± 0.15
WR 212	2.80 ± 0.10	PMX 517	2.73 ± 0.12
WR 150	2.60 ± 0.30	PMX 518	2.70 ± 0.20
WR 75	3.25 ± 0.25	PMX 550	2.90 ± 0.10
A 355	3.00 ± 0.20	PMX 551	3.00 ± 0.10
W250	2.95 ± 0.15	PMX 552	2.90 ± 0.10
W212/3.3	3.30 ± 0.30	PMX 553	2.90 ± 0.10
W 100	3.50 ± 0.15	PMX 554	3.00 ± 0.10
W 50	3.35 ± 0.35	PMX 555	2.55 ± 0.15
W 150/3.5	3.50 ± 0.10	PMX 556	3.70 ± 0.15
W 463	3.30 ± 0.30	Bz WR75	3.25 ± 0.25
<160	3.50 ± 0.30	Bz U10	2.575 ± 0.125
W 75	3.30 ± 0.30	Bz W75	3.30 ± 0.30
W 45	2.90 ± 0.30	Bz W45	2.90 ± 0.30
M 100	3.20 ± 0.30	Bz U20	1.80 ± 0.15
M 50	2.95 ± 0.35		

Relative vapour density Not applicable The product is a solid

Particle characteristics See the following table

Particle size distribution	100 Mesh	200 Mesh
Particle size	% cum	% cum
> 500 µm		
425 µm		
355 µm		
300 µm		
250 µm		
212 µm	0	
200 µm		
180 µm	0.1	
160 µm		
150 µm	1	
125 µm		
106 µm		0
90 µm		
75 µm		1
63 µm		
53 µm		
45 µm	55 - 70	20 - 40
40 µm		
36 µm		

Particle size distribution	CuSn10 <710	WR 350	WR 212	WR 150	WR 75	A 355	W250	W212/3.3	W 100	W 50
Particle size										
> 1000 µm	0									
355 µm		0				0				
250 µm			0			7 - 25	0			
212 µm		10 - 20	3 max	0.2 max			3 max	0		
160 µm			7 - 15							
150 µm				8 max		30 - 55	25 max	5 max		
125 µm									0	
106 µm	10 max	35 - 55			0	60 - 85		20 max	2 max	
90 µm										0
75 µm					0.5 max	85 min		29 - 49	20 - 30	0.5 max
63 µm			60 - 80				70 - 90			5 max
45 µm		60 - 80		85 min	25 - 45			40 - 70	60 - 80	20 max
25 µm										

Particle size distribution	W 150/3.5	W 463	<160	W 75	W 45	M 100	M 50	W 36
Particle size								
								D50 < 16 µm
> 600 µm								
500 µm								
315 µm								
300 µm								
250 µm								
212 µm								
200 µm			0.2 max					
160 µm			2.0 max					
150 µm	0 max							
125 µm						1 max		
106 µm	1 max			0	0	10 max		
100 µm								
90 µm							0	
80 µm		0.5 max	15 - 35					
75 µm	10 max			2 max			0.5 max	0
63 µm		5.0 max				10 - 20	5 max	1 max
45 µm	15 - 35			10 - 40	10 max	25 - 45	20 max	5 max
40 µm			44 - 74					
25 µm					20 max			

Particle size distribution	511	513	515	517	518	550	551	552	553	554	555	556
Particle size												
> 300 µm	0		0			0	0	0	0	0	0	0
> 250 µm												
> 212 µm		0										
> 180 µm												
> 150 µm	10 max	5 max										
> 106 µm			20 max			10 max	10 max	10 max	10 max	10 max		
> 45 µm	45 - 65	40 - 60	50 - 70			35 - 50	35 - 50	35 - 50	35 - 50	35 - 50		

Particle size distribution	Bz WR75	Bz U10	Bz W75	Bz W45	Bz U20
Particle size					
> 300 µm					
212 µm		0			
200 µm					
180 µm					0.2 max
150 µm		10 max			
125 µm					
106 µm	0		0	0	10 max
80 µm					
75 µm	0.5 max		2 max		
63 µm					
45 µm	25 - 45	75 - 85	10 - 40	10 max	40 - 60
40 µm					
25 µm				20 max	

9.2 Other information

9.2.1. Information with regard to physical hazard classes
Information not available

9.2.2. Other safety characteristics
Information not available

10 STABILITY AND REACTIVITY

10.1 Reactivity

There are no particular risks of reaction with other substances under normal conditions of use.

10.2 Chemical stability

The product is stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Dusts are potentially explosive when mixed with air.

10.4 Conditions to avoid

Avoid accumulation of dust in the environment.

10.5 Incompatible materials

Acids, bases, strong oxidising agents

10.6 Hazardous decomposition products

Copper and tin compounds.

11 TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

No incidents of damage to health due to exposure to the product are known. In any case, it is recommended to work in accordance with good industrial hygiene practices.

Metabolism, kinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short- and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

Based on the available data and taking into account the classification criteria of Annex I, Part 3 of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class

ATE (Inhalation) of the mixture:	Not classified (no relevant component)
ATE (Oral) of the mixture:	Not classified (no relevant component)
ATE (Dermal) of the mixture:	Not classified (no relevant component)

Tin

LD50 (Dermal):	> 2000 mg/kg Rata
LD50 (Oral):	> 2000 mg/kg Rata

Copper

LD50 (Dermal):	> 2000 mg/kg Rata
LD50 (Oral):	> 2500 mg/kg Rata
LC50 (Inhalation mists/dusts):	> 5.11 mg/l/4h Rata

SKIN CORROSION / IRRITATION

Based on the available data and taking into account the classification criteria set out in table 3.2.3 of Annex I of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class.

SERIOUS EYE DAMAGE / EYE IRRITATION

Based on the available data and taking into account the classification criteria set out in table 3.3.3 of Annex I of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class.

RESPIRATORY OR SKIN SENSITISATION

Based on the available data and taking into account the classification criteria of Annex I, Part 3 of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class.

GERM CELL MUTAGENICITY

Based on the available data and taking into account the classification criteria of Annex I, Part 3 of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class.

CARCINOGENICITY

Based on the available data and taking into account the classification criteria of Annex I, Part 3 of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class.

REPRODUCTIVE TOXICITY

Based on the available data and taking into account the classification criteria of Annex I, Part 3 of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class.

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

Based on the available data and taking into account the classification criteria of Annex I, Part 3 of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

Based on the available data and taking into account the classification criteria of Annex I, Part 3 of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class.

ASPIRATION HAZARD

Based on the available data and taking into account the classification criteria of Annex I, Part 3 of Reg. (EC) 1272/2008 and subsequent amendments, the product is not classified for this hazard class.

11.2 Information on other hazards

According to the available data, the product does not contain any substance included in the main European lists of potential or suspected endocrine disruptors with effects on human health that are under evaluation.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Based on the classification assessment of the components and the classification provisions of Annex I, Part 4 of Reg. (EC) 1272/2008 and subsequent amendments, the mixture is classified as hazardous to the environment with short- and long-term effects (Aquatic Acute 1, H400, Aquatic Chronic 2, H411).

The product must be considered hazardous to the environment and exhibits high toxicity to aquatic organisms. The product must be considered hazardous to the environment and exhibits toxicity to aquatic organisms, with long-term adverse effects on the aquatic environment.

Tin

LC50 - Fish	> 12.4 µg/L Pimephales Promelas
EC50 - Algae / Aquatic plants	> 19.2 µg/L Raphidocelis Subcapitata
Chronic NOEC Algae / Aquatic plants	19.2 µg/L Raphidocelis Subcapitata, 72h

Copper

LC50 - Fish	193 µg/L Pimephales Promelas
EC50 - Crustaceans	7 µg/L Daphnia Magna
EC50 - Algae / Aquatic plants	32 mg/l/72h Raphidocelis subcapitata
Chronic NOEC Fish	188 µg/L Pimephales Promelas, 30d
Chronic NOEC Crustaceans	33 µg/L Peanus mergolensis, 14d

12.2 Persistence and degradability

Information not available

12.3 Bioaccumulative potential

Information not available

12.4 Mobility in soil

Information not available

12.5 Results of PBT and vPvB assessment

According to the available data, the product does not contain PBT or vPvB substances in a proportion ≥ 0.1%.

12.6 Endocrine disrupting properties

According to the available data, the product does not contain any substance included in the main European lists of potential or suspected endocrine disruptors with effects on the environment that are under evaluation.

12.7 Other adverse effects

Information not available

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Reuse, if possible. Product residues must be considered special hazardous waste. The hazardousness of waste containing part of this product must be assessed in accordance with current legislation.

Disposal must be entrusted to an authorised waste management company, in accordance with national and, where applicable, local regulations.

The transport of waste may be subject to ADR.

CONTAMINATED PACKAGING

Contaminated packaging must be sent for recovery or disposal in accordance with national waste management regulations.

14 TRANSPORT INFORMATION

14.1 UN number or ID number

ADR / RID, IMDG, IATA: 3077

ADR / RID:	If transported in single or inner packagings with a capacity ≤ 5 kg or 5 L, the product is not subject to the ADR/RID provisions as provided for in Special Provision 375.
IMDG:	If transported in single or inner packagings with a capacity ≤ 5 kg or 5 L, the product is not subject to the provisions of the IMDG Code, as provided for in Section 2.10.2.7.
IATA:	If transported in single or inner packagings with a capacity ≤ 5 kg or 5 L, the product is not subject to the other IATA provisions, as provided for in Special Provision A197.

14.2 UN proper shipping name

ADR / RID:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)
IMDG:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)
IATA:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (copper)

14.3 Transport hazard class(es)

ADR / RID:	Class: 9	Label: 9	
IMDG:	Class: 9	Label: 9	
IATA:	Class: 9	Label: 9	

14.4 Packing group

ADR / RID, IMDG, IATA: III

14.5 Environmental hazards

ADR / RID:	Environmentally hazardous	
IMDG:	Marine pollutant	
IATA:	Environmentally hazardous	

14.6 Special precautions for user

ADR / RID:	HIN - Kemler: 90 Special provision: 274, 335, 375, 601	Limited quantities: 5 kg	Tunnel restriction code: (-)
IMDG:	EMS: F-A, S-F	Limited quantities: 5 kg	
IATA:	Cargo:	Maximum quantity: 400 kg	Packing instructions: 956
	Passengers: Special provision:	Maximum quantity: 400 kg A97, A158, A179, A197, A215	Packing instructions: 956

14.7 Maritime transport in bulk according to IMO instruments

Information not relevant

15 REGULATORY INFORMATION

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

Seveso Category - Directive 2012/18/EU: E1
Restrictions on the product or contained substances pursuant to Annex XVII of Regulation (EC) 1907/2006
Contained substances
Point 75 Tin
Point 75 Copper REACH Reg.: 01-2119480154-
42-XXXX
Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable
Substances in the Candidate List (Art. 59 REACH)
According to the available data, the product does not contain SVHC substances in a proportion ≥ 0.1%.

Substances subject to authorisation (Annex XIV REACH)
None

Biocides Regulation (Reg. (EU) 528/2012):

not applicable

Detergents Regulation (Reg. (EC) 648/2004):

not applicable

Dir. 2004/42/EC - VOC / Legislative Decree 161/2006:

not applicable

Substances subject to export notification (Regulation (EU) 649/2012):

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None
Health controls
Information not available
Classification for water pollution in Germany (AwSV, of 18 April 2017)
WGK 2: Hazardous to water

15.2 Chemical safety assessment

A chemical safety assessment has been carried out for the following contained substances: Copper

16 OTHER INFORMATION

Text of the hazard statements (H) cited in sections 2-3 of the sheet:

Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

LEGEND:

- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road - CAS: Chemical Abstracts Service number - EC: Identification number in ESIS (European archive of existing substances)

- CLP: Regulation (EC) 1272/2008

- DNEL: Derived No Effect Level

- EC50: Concentration causing an effect in 50% of the tested population

- EmS: Emergency schedule

- GHS: Globally Harmonized System for the classification and labelling of chemicals

- IATA DGR: International Air Transport Association Dangerous Goods Regulations

- IC50: Immobilisation concentration for 50% of the tested population

- IMDG: International Maritime Dangerous Goods Code

- IMO: International Maritime Organization

- INDEX: Identification number in Annex VI of the CLP

- LC50: Lethal concentration 50%

- LD50: Lethal dose 50%

- OEL: Occupational exposure level

- PBT: Persistent, bioaccumulative and toxic according to REACH

- PEC: Predicted environmental concentration

- PEL: Predicted exposure level

- PNEC: Predicted no-effect concentration

- REACH: Regulation (EC) 1907/2006

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

- ATE: Acute toxicity estimate

- TLV: Threshold limit value

- TLV CEILING: Concentration that must not be exceeded at any time during occupational exposure.

- TWA: Time-weighted average exposure limit

- TWA STEL: Short-term exposure limit

- VOC: Volatile organic compound

- vPvB: Very persistent and very bioaccumulative according to REACH

- WGK: Water hazard class (Germany).

- A1 = confirmed human carcinogen.

- A2 = suspected human carcinogen.

- A3 = confirmed animal carcinogen with unknown relevance to humans.

- A4 = not classifiable as a human carcinogen.

- A5 = not suspected as a human carcinogen.

- IBE = Substance with Biological Exposure Index.

GENERAL BIBLIOGRAPHY:

1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
3. Regulation (EU) 2020/878 (Annex II to the REACH Regulation)
4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)
7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (EU) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (EU) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (EU) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (EU) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (EU) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (EU) 2022/692 (XVIII Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous Properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA Agency website
- Database of SDS models for chemical substances - Ministry of Health and Istituto Superiore di Sanità

CALCULATION METHODS

Physicochemical hazards: the hazardousness is derived from the classification criteria of the CLP Regulation Annex I Part 2 and subsequent amendments. Health hazards were assessed using the calculation method set out in Reg. (EC) 1272/2008 (CLP) and subsequent amendments for the classification of

mixtures when data are available on all or some of the components of the mixture:

Acute Tox: application of criteria in Table 3.1.1, Annex I Part 3 of the CLP Regulation and subsequent amendments

Skin Corr. 1A/1B/1C H314: application of the additivity formula of the criteria in Table 3.2.3, Annex I Part 3 of the CLP Regulation
Skin Irrit 2 H315: application of the additivity formula of the criteria in Table 3.2.3, Annex I Part 3 of the CLP Regulation Eye Dam 1 H318: application of the additivity formula of the criteria in Table 3.3.3, Annex I Part 3 of the CLP Regulation Eye Irrit. 2 H319: application of the additivity formula of the criteria in Table 3.3.3, Annex I Part 3 of the CLP Regulation Eye Irrit. 2 H319: table 3.3.3 of Annex I, Part 3 of Reg. (EC) 1272/2008 (CLP) and subsequent amendments
Skin Sens 1A/1B/1 H317 Table 3.4.5 of Annex I, Part 3 of Reg. (EC) 1272/2008 (CLP) and subsequent amendments
Resp Sens 1A/1B/1 H334 Table 3.4.5 of Annex I, Part 3 of Reg. (EC) 1272/2008 (CLP) and subsequent amendments
Muta. 1A/1B, 2 H340 - H341: table 3.5.2, Annex I Part 3 of the CLP Regulation and subsequent amendments

Canc 1A/1B, 2 H350 - H351: table 3.6.2, Annex I Part 3 of the CLP Regulation and subsequent amendments

Repr 1A/1B, 2 H360 - H361: table 3.7.2, Annex I Part 3 of the CLP Regulation and subsequent amendments

STOT SE 1, 2 H370 - 371: application of calculation methods - table 3.8.3 of Annex I, Part 3 of Reg. (EC) 1272/2008 (CLP) and subsequent amendments
STOT SE 3 H336: chap. 3.8.3.4.5 of Annex I, Part 3 of Reg. (EC) 1272/2008 (CLP) and subsequent amendments

STOT RE 1, 2 H372 - H373: table 3.9.4, Annex I, Part 3 of the CLP Regulation and subsequent amendments

Asp Tox 1 H304: application of criteria 3.10, Annex I Part 3 of the CLP Regulation and subsequent amendments
Environmental hazards were assessed using the calculation method set out in Reg. (EC) 1272/2008 (CLP) and subsequent amendments for the classification

of mixtures when data are available on all or some of the components of the mixture:

toxicity to the aquatic environment, acute effects: table 4.1.1 of Annex I, Part 4 of Reg. (EC) 1272/2008 (CLP) and subsequent amendments; toxicity to the aquatic environment, chronic effects: table 4.1.2 of Annex I, Part 4 of Reg. (EC) 1272/2008 (CLP) and subsequent amendments Notes for the user:

The information contained in this sheet is based on our knowledge at the date of the latest version. Users must ensure the suitability and completeness of the information in relation to the specific use of the product.

It must not be construed as a guarantee of any specific property of the product.

Since the use of the product is not under our direct control, it is the user's responsibility to comply with the applicable health and safety laws and regulations. No liability is accepted for improper use.

Provide adequate training to personnel handling chemical products.

Sections modified compared with the previous version: all.

Safety data sheet annexes include the exposure scenarios for the substances: Copper.