

READY MIX BRASS

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

1.1 Product identifier.

Product name:	READY MIX BRASS
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1.2 Relevant identified uses of the substance or mixture and uses advised against.

Decorative brass-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

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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.

The substance does not meet the criteria for a persistent, bioaccumulative and toxic (PBT) substance or a very persistent and very bioaccumulative (vPvB) substance. The substance does not have endocrine-disrupting properties.

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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	68.50 – 71.50	Aquatic Acute 1 H400 M=1, Aquatic Chronic 2 H411	Not applicable
Zinc powder (stabilised)			
Index 030-001-01-9 EC 231-175-3 CAS 7440-66-6 REACH Reg. 01-2119467174-37-XXXX	28.50 – 31.50	Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1	Not applicable

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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.

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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.

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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.

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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 inert dust not otherwise classified (respirable fraction PNOC: 3 mg/m³; inhalable fraction PNOC: 10 mg/m³). 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.

Copper

Threshold limit value

Type	State	TWA/8h mg/m ³ · ppm	STEL/15min mg/m ³ · ppm	Notes / Remarks
TLV-ACGIH <i>Fumes, as Cu</i>		0.2		Irritation; Measured by vertical elutriator, cotton dust sampler, inhalable particles; metal fume fever
TLV-ACGIH <i>Dusts and mists, as Cu</i>		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/m ³		1 mg/m ³		1 mg/m ³		1 mg/m ³	
Dermal		273 mg/kg bw/d		137 mg/kg bw/d		273 mg/kg bw/d		137 mg/kg bw/d

Zinc powder (stabilised)

Predicted No-Effect Concentration in the environment - PNEC

Reference value in fresh water	14.4	µg/L
Reference value in marine water	7.2	µg/L
Reference value for fresh water sediment	146.9	mg/kg/d
Reference value for marine water sediment	162.2	mg/kg/d
Reference value for STP microorganisms	100	µg/L
Reference value for the terrestrial compartment	83.1	mg/kg/d

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.

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.

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PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Properties	Value	Information
Physical state	Powder	
Colour	Golden 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 available	
Kinematic viscosity	Not applicable	The product is a solid
Solubility	Not available	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	

Density and/or relative density

Mixture name	Apparent density
OT 30	-
OT 50	-
OT 1000	2.55 ± 0.35
OT 212-63	2.65 ± 0.35
OT 212	3.20 ± 0.30
OT 212 ELA	2.85 ± 0.35
OT 63	3.20 ± 0.40

Relative vapour density Not applicable The product is a solid

Particle characteristics See the following table

Particle size distribution	OT 30	OT 50	OT 1000	OT 212-63	OT 212	OT 212 ELA	OT 63
Particle size							
1000 µm	0	0	0				
600 µm							
500 µm		50 min					
425 µm	20 max		20 - 40				
300 µm							
250 µm				0	0	0	
212 µm				10 max			
160 µm							
150 µm	90 min	90 min			10 - 25	10 - 25	
125 µm							
106 µm							0
80 µm							
75 µm			90 min				
63 µm							15 max
53 µm				95 min			
45 µm					60 - 90	60 - 90	30 - 50
40 µm							

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

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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

Strong acids, bases and oxidising agents.

10.6 Hazardous decomposition products

Copper and zinc compounds.

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TOXICOLOGICAL INFORMATION

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

No incidents of harm to health due to exposure to the product are known. In any case, it is recommended to operate in compliance 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

According to the available data and considering 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)

Copper

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

Zinc powder (stabilised)

LD50 (Oral):	> 2000 mg/kg Rata
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SKIN CORROSION / IRRITATION

According to the available data and considering the classification criteria provided 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/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

According to the available data and considering 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

According to the available data and considering 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

According to the available data and considering 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

According to the available data and considering 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

According to the available data and considering 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

According to the available data and considering 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

According to the available data and considering 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.

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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).

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, 30 días
Chronic NOEC Crustaceans	33 µg/L Peanus mergolensis, 14 días

Zinc powder (stabilised)

LC50 - Fish	315 µg/L Thymallus arcticus
EC50 - Crustaceans	860 µg/L Daphnia magna
Chronic NOEC Fish	36 µg/L Oncorhynchus mykiss
Chronic NOEC Crustaceans	35 µg/L Daphnia magna, 3 semanas

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 percentages $\geq 0.1\%$.

12.6 Endocrine disrupting properties

According to the available data, the product does not contain substances 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

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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.

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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:	Maximum quantity: 400 kg	Packing instructions: 956
	Special provision:	A97, A158, A179, A197, A215	

14.7 Maritime transport in bulk according to IMO instruments

Information not relevant

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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 Granulated copper [particle length: 0.9 mm to 6.0 mm; particle width:

0.494 to 0.949 mm] REACH Reg.: 01-2119480154-42-0065

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 $\geq 0.1\%$.

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
Zinc powder (stabilised)

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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 hazard was 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 Regulation (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 the 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 criteria of the additivity formula, Table 3.2.3, Annex I, Part 3 of the CLP Regulation

Skin Irrit 2 H315: application of the criteria of the additivity formula, Table 3.2.3, Annex I, Part 3 of the CLP Regulation

Eye Dam 1 H318: application of the criteria of the additivity formula, Table 3.3.3, Annex I, Part 3 of the CLP Regulation

Eye Irrit. 2 H319: application of the additivity formula criteria, 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

Carc 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 Regulation (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 Regulation (EC) 1272/2008 (CLP) and subsequent amendments;

toxicity to the aquatic environment, chronic effects: table 4.1.2 of Annex I, Part 4 of Regulation (EC) 1272/2008 (CLP) and subsequent amendments

Note 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.

This document must not be interpreted 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 obligation to comply with the applicable health and safety laws and regulations under their own responsibility. 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, Zinc powder (stabilised).