SECTION 1. IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/ UNDERTAKING

1.1. Product identifier:

Trade name: COPPER HYDROXIDE WP 50% CU BLUE
(*Wettable powder (WP))

1.2. Relevant identified uses of the mixture: Agriculture – Fungicides

1.3. Other identification way: UFI : 2H00-90DS-R005-T5XA

1.4 Details of the supplier:

SALES Y DERIVADOS DE COBRE S.A.
Address: Calle 4, Mz-B1, Lote 18;
Urb. Ind. Las Vegas
Puente Piedra, LIMA 22 PERU
Phone Nr.: (51 1)548 0205
Fax Nr.: (51 1)548 3292
E Mail: anycander@saldecoperu.com
web: http://www.saldecoperu.com

1.5. Emergency telephone number:

Local Poisons Information Centre

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the mixture:

According to classification rules of Regulation (EC) No 1272/2008: Acute Tox. 4: H302; Eye Dam. 1: H318; Aquatic Acute 1: H400; Aquatic Chronic 1: H410.

Adverse physicochemical effects: Not applicable.

Adverse human health effects: Harmful if swallowed. Causes serious eye damage.

Adverse environmental effects: Very toxic to aquatic life with long lasting effects.

2.2. Label elements:

According to Regulation (EC) No 1272/2008:

Hazard pictogram(s):



Signal word(s): Danger

Hazard statement(s):
H302 - Harmful if swallowed;
H318 - Causes serious eye damage;
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray;
P273 - Avoid release to the environment;
P280 - Wear protective gloves/protective clothing/eye protection/face protection;
P304+P340 - IF INHALED - Remove victim to fresh air and keep at rest in a position comfortable for breathing;
P305+P351+P338 - IF IN EYES - Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing;
P312 - Call a POISON CENTER or doctor/physician if you feel unwell;
P391 - Collect spillage;
P501 - Dispose of contents/container in accordance with local/ regional/ national regulation.

Supplemental information: EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.
SP 1 - Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads)

2.3. Other hazards: No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances: Not applicable

3.2. Mixtures:

Substance identifier			% (w/w)	Substance classification According to Regulation No 1272/2008	REACH Registration No
Name	CAS No	EC No			
Copper Hydroxide ($Cu(OH)_2$)	20427-59-2	243-815-9 (EINECS)	50 (**)	Acute Tox. 2: H330; Acute Tox. 4: H302; Eye Dam. 1: H318; Aquatic Acute 1: H400; Aquatic Chronic 1: H410	(*)
Sodium diisopropylnaphthalene sulphonate	1322-93-6	215-343-3 (EINECS)	<1	Acute Tox. 4: H302; Eye Irrit. 2: H319; Acute Tox. 4: H332; STOT SE 3; H335	NA

(*) Active substance for use in plant protection products only, regarded as being registered (Article 15(1) of Regulation 1907/2006)
(**) Expressed as copper
Note: Full text of Hazard Statements not written out in full in this section, are referred in section 16.

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures:

Inhalation: In case of inhalation move the victim to fresh air. Control breathing and if necessary provide oxygen therapy. Seek medical advice, if symptoms persist or develop.
Skin contact: In case of contact with skin take off contaminated clothing, and wash immediately affected area with water and soap for 15-20 minutes. Seek medical advice, if symptoms persist or develop.
Eye contact: In case of contact with eyes, separate eyelids and rinse immediately with plenty of water for 15-20 minutes; do not forget to remove lens. Seek medical advice.
Ingestion: If swallowed, wash mouth with water provided the victim is conscious. Seek medical advice. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless told so by a physician or poison control centre.
General measures: Seek medical assistance and show the container or label to the physician. Never leave the victim alone.
4.2. Most important symptoms and effects: (associated to active ingredients): **(Copper compounds):** **Contact** - irritation of the eyes, skin and mucous; **Ingestion** - gastrointestinal disorder: nausea, vomiting, mouth and oesophagus burn, abdominal ache, diarrhoea eventually with melenas, haemolysis, liver failure with formation of liver granulomas and kidney failure, fever, asthenia. **Inhalation** – respiratory disturbs, cough, dyspnoea, increases in mucous secretions; fever.
4.3. Indication of any immediate medical attention and special treatment needed: Provide supportive care and symptomatic treatment. If swallowed induce vomiting or provide a gastric wash; administrate activated charcoal or saline laxative (type: sodium or magnesium sulphate or similar). Antidotes: EDTA, BAL or penicillamine.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media:

Suitable extinguishing media: Dry chemicals, carbon dioxide (CO_2), foam and water spray.
Unsuitable extinguishing media: Water jet.

5.2. Special hazards arising from the mixture: During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion (copper oxides).

5.3. Advice for fire-fighters:

Protective measures: Evacuate all non essential persons from fire site. Fight fire from a protected location. Avoid inhalation of fumes (keep on windward side). Depending on fire location, it´s preferable not to use water to prevent the risk of environmental contamination; if not possible, use spray water consciously. Use water spray to cool containers exposed to fire. Keep adequate measures to prevent environmental contamination. Dike fire control water, for later disposal.

Special protective equipment for fire-fighters: Use self-contained breathing apparatus and complete protective clothes.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: Avoid contact or inhalation of product.
For emergency responders: Isolate the spill area and limit the access to essential personnel. Use adequate protective clothes, gloves and protective mask with dust filter. Eliminate any possible ignition source. Ventilate confined space before entry.

6.2. Environmental precautions: Prevent spills dispersion. Keep spills and cleaning runoff, out of sewers and open bodies of water. Block the leakage, if this operation doesn't implicate risks. If product has contaminated bodies of water, sewage system, or soil or vegetation, alert the local authorities.

6.3. Methods and material for containment and cleaning up: Cover entire spill with absorbing material or sand, collect it, avoiding producing dust, and place it in a container appropriate for later disposal. Avoid use of water for cleaning up.

6.4. Reference to other sections: See subsection 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling:

Use adequate protective equipment to avoid direct contact or inhalation of the product.
Handle product in well ventilated areas if possible with emergency eyewash and safety shower.
Eliminate any possible ignition source on handling and storing areas. A good personal hygiene is required.
Do not smoke, drink or eat while handling the product.
After handling, remove contaminated clothing and wash hands thoroughly with soap and water.
Keep personal protective equipment and contaminated clothing separate from other laundry; wash it separately.
Don't handle damaged package without adequate protective devices.
Keep the container tightly closed when the product is not in use.

7.2. Conditions for safe storage, including any incompatibilities:

Keep product only in the original container, tightly closed and labelled.
Store on fresh, dry and well ventilated place, protected from sunlight, heat and humidity.
Do not store near flame and heat sources.
Keep away from food, drink and animal feeding stuffs.
Keep children and public away from storage place.
Provide fire-fighting measures and electrostatic discharges protection devices, in storing areas.

7.3. Specific end use: The authorized on label

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

(Copper): ADI: 0,15 mg Cu/kg b.w/day; **AOEL**: 0,072 mg Cu/ kg b.w /day.
TLV-TWA (ACGIH): 1 mg/m^3 (copper)

8.2. Exposure controls:

Appropriate engineering controls: Ensure natural or mechanical ventilation, control of ignition sources, fire fighter measures and availability of emergency shower / eyewash in confined work areas.

Individual protection measures, such as personal protective equipment: Eye/ face protection: Chemical goggles or safety glasses that assure complete shielding of eyes (for example type Univet 543).

Skin Protection: Apron or other slight protection clothes, nitrile gloves and plastic or rubber boots.

Respiratory Protection: Disposable mask with P2 filter.

Thermal hazards: Not applicable

Environmental exposure controls: Avoid spill. Keep the product in proper storing conditions. Keep the containers closed.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Physical State	Solid (Powder)
Colour	Blue
Odour	NA
Odour threshold	NA
pH (10% dispertion)	7.3
Melting point/ freezing point	NA
Initial boiling point and boiling range	NA
Flash point	NA
Evaporation rate	NA
Flammability	Not flammable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	NA
Vapour density	NA
Relative density	0.55
Solubility	NA
Partition coefficient n-octanol/water	NA
Auto-ignition temperature	NA
Decomposition temperature	NA
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidising properties	Not corrosive

9.2. Other information:

Miscibility	NA
Fat solubility	NA
Conductivity	NA
Gas group	Not applicable

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity: No information available.

10.2. Chemical stability: Stable under normal use and storage conditions.

10.3. Possibility of hazardous reactions: No information available.

10.4. Conditions to avoid: Avoid storage in moist or hot conditions, and near of heat and ignition sources. Keep away from food, drinks and open bodies of water.

10.5. Incompatible materials: Alkaline materials. Corrosive to metals.

10.6. Hazardous decomposition products: Thermal decomposition or combustion may generate irritating and probably toxic gases (copper oxides).

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity:	
Acute Oral LD_{50}:	833 mg/kg (Rats)
Acute Dermal LD_{50}:	>2000 mg/kg (Rats) (*)
Acute Inhalation LC_{50} (4h):	>3.61 mg/l air (Rats) (*)
Acute Effects:	
Skin corrosion/ irritation:	Not irritant
Serious eye damage/irritation:	Irritant (Rabbits)
Respiratory sensitisation:	No information available
Skin sensitisation:	Not a skin sensitizer (Guinea pig)
Chronic effects:	
Mutagenicity:	Not observed
Carcinogenicity:	Not observed
Reproductive toxicity:	Not observed
STOT- single exposure:	Not demonstrated
STOT- repeated exposure:	Not demonstrated
Aspiration hazard:	No information available

(*) Based on available data, the classification criteria are not met.

Likely routes of exposure: Contact with skin, eyes, ingestion and inhalation.

Symptoms and effects: See subsection 4.2.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute toxicity:	
Fish acute LC_{50} (96 h):	0.0165 mg/l (Rainbow trout)
Aquatic invertebrates acute EC_{50} (48 h):	0,038 mg /l (*Daphnia magna*)
Algae acute E_bC_{50} (72 h):	NA
Birds acute Oral LD_{50}:	223 mg Cu/kg (Bobwhite quail); 556 mg Cu/kg (Japanese quail)
Bee oral LD_{50} (48 h):	49 µg/bee
Bee contact LD_{50} (48 h):	>57 µg/bee
Aquatic plants CE_{50}:	NA
Chronic toxicity:	
Fish chronic NOEC (48 h)	3.2 mg/l (Zebrafish)
Aquatic invertebrates chronic NOEC (21 d):	0024 mg Cu/l (*Daphnia magna*)
Algae chronic NOEC (72 h):	0.00939 mg/l (*Selenastrum capricornotum*)

12.2. Persistence and degradability: (Copper compounds):

- Soil: Very persistent in soil. DT_{50} (typical): 10000 d; DT_{50} (field): 2600 d. Copper compounds are scarcely degradable by soil organisms. It´s elimination occurs by physical methods like entrainment and dilution by rain or irrigation water.
- Water: No information available.

12.3. Bioaccumulative potential:(Copper compounds): Low bioaccumulation potential. Log P_{ow}< 3.

12.4. Mobility in soil: (Copper compounds): Copper is strongly held in the superficial soil and is practically immobile.

12.5. Results of PBT and vPvB assessment: NA.

12.6. Other adverse effects: No information available.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods:

Surplus disposal: Dispose in a safe manner in accordance with local/ national regulations. Avoid personnel exposure. Waste material code: 07 04 13* (Council Decision 2001/118/EC).

Containers disposal: Empty containers should be triple rinsed (or equivalent). Do not reuse product containers. Dispose of product containers, waste containers and residues in an authorised waste collection point. Containers should be closed and labelled. Waste material code packaging: 15 01 10* (Council Decision 2001/118/EC).

SECTION 14. TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:

14.1	**UN number:**	UN2775
14.2	**UN proper shipping name:**	COPPER BASED PESTICIDE, SOLID, TOXIC (Copper Hydroxide)
14.3	**Transport hazard**	6.1
	Labels:	6.1
14.4	**Packing group:**	III
14.5	**Environmental hazards:**	Yes
14.6	**Special precautions for user**	
	Special regulations:	274, 61, 648
	Tunnel restriction code:	(C/E)
	Physico-Chemical properties:	see section 9
	Limited quantities:	0
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code:**	Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 39-18:

14.1	**UN number:**	UN2775
14.2	**UN proper shipping name:**	COPPER BASED PESTICIDE, SOLID, TOXIC (Copper Hydroxide)
14.3	**Transport hazard**	6.1
	Labels:	6.1
14.4	**Packing group:**	III
14.5	**Marine pollutant:**	Yes
14.6	**Special precautions for user**	
	Special regulations:	274, 61
	EmS Codes:	F-A, S-A
	Physico-Chemical properties:	see section 9
	Limited quantities:	0
	Segregation group:	Non-applicable
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code:**	Non-applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable: the product is not transported in bulk.

Transport of dangerous goods by air:

With regard to IATA/ICAO 2021:

14.1	**UN number:**	UN2775
14.2	**UN proper shipping name:**	COPPER BASED PESTICIDE, SOLID, TOXIC (Copper Hydroxide)
14.3	**Transport hazard**	6.1
	Labels:	6.1
14.4	**Packing group:**	III
14.5	**Environmental hazards:**	Yes
14.6	**Special precautions for user**	
	Physico-Chemical properties:	see section 9
14.7	**Transport in bulk according to Annex II of Marpol and the IBC Code:**	Non-applicable

SECTION 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the mixture:
Seveso III category: E1

15.2. Chemical safety assessment: Chemical safety assessment was not carried out for the mixture.

SECTION 16. OTHER INFORMATIONS

Content review: The sections / sub sections marked with (➢) were changed with relevant information, from the previous version.
Methods for evaluation of the information used for classification: Classification was assigned on the basis of classification data of a similar product.
Full text of Hazard Warnings mentioned and not written out in full in previous sections:
H319 - Causes serious eye irritation;
H330 - Fatal if inhaled;
H332 - Harmful if inhaled;
H335 - May cause respiratory irritation;
H400 – Very toxic to aquatic life.
Consulted Data Bases:
ECHA: European Chemicals Agency;
FOOTPRINT (2007/2008) The FOOTPRINT Pesticide Properties DataBase; Database collated by the University of Hertfordshire as part of the EU-funded FOOTPRINT project (FP6-SSP-022704). http://www.eu-footprint.org/ppdb.html;
AGRITOX – Base de données sur les substances actives phytopharmaceutiques;
EU Pesticide Database.
Regulation references:
Annex II of Regulation (EC) No 1907/2006 as amended by Regulation (UE) No 2015/830
Literature references:
The e-Pesticide Manual, version 3.2 2005-06, Thirteenth Edition, Editor: CDS Tomlin;
Manual Toxicológico de Produtos Fitosanitários para Uso Sanitário – Instituto Nacional de Toxicologia / AEPLA (Associación Empresarial para la Protección de las Plantas (Espanha);
ADR 2015 Editor Tutorial; IMDG Code, 2014 Edition; IATA, 2014 Edition.
EFSA Scientific Report (2008) 187, 1-101; Conclusion on the peer review of copper compounds.
Glossary:

ADI: Acceptable Daily Intake
AOEL: Acceptable Operator Exposure Level
BCF: Bio-concentration factor
b.w.: Body weight
CAS: Chemical Abstract Service
DT_{50}: Time for 50% loss; half-life
EC_{50}: Medium Effective Concentration
LD_{50}: Medium Lethal Dose.
LC_{50}: Medium Lethal Concentration
NA: No data available
NOEL: No observed effect level
NOEC: No observed effect concentration
PBT: Persistent, bioaccumulative and toxic
TLV: Threshold Limit Value
TWA: Time Weighted Average
vPvB: Very persistent and very bioaccumulative

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

No liability will be accepted for any injury, loss or damage resulting from failure to take account of information or advice contained in this safety data sheet.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.