



Safety Data Sheet dated 18/09/2017, version 1

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

1.1 Product Identifier

Mixture identification: -
Trade name: AIRONE SC
Trade code: -

1.2 Relevant identified uses of the substance/mixture and uses advised against

Agricultural use
Other use not admitted

1.3 Details of the supplier of the safety data sheet

Company:
ISAGRO S.p.A. – Via Caldera, 21 – 20153 – Milan - Italy
Emergency telephone number of the company and/or of an authorised advisory centre:
Tel.: 02 40 901 276
Competent person responsible for the safety data sheet:
msds@isagro.com



1.4 Emergency telephone number

QSE Department (office hours, local time: 9.00 – 18.00) - Phone n.. ++39 02 40901209

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

According to EC Regulation n. 1272/2008 (CLP):

-  Warning, Aquatic Acute 1, Very toxic to aquatic life.
-  Warning, Aquatic Chronic 1, Very toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2 Label elements

Symbols:



Warning

Hazard statements:

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container to local/regional/national/international regulations

Special Provisions:

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

2.3. Other hazards
vPvB and/or PBT substances: none
Other Hazards:
No other hazards





2.3 Other hazards
No other hazards

3. COMPOSITION/INFORMATION ON INGREDIENTS






3.1 Substances
Not applicable

3.2 Mixtures
Hazardous components within the meaning of EEC directive 67/548 and CLP regulation and related classification:

15% - 20% copper oxychloride tech. (57-58)
CAS: 1332-40-7

-  3.1/4/Oral Acute Tox. 4 H302
-  3.1/4/Inhal Acute Tox. 4 H332
-  4.1/A1 Aquatic Acute 1 H400
-  4.1/C2 Aquatic Chronic 2 H411

15% - 20% copper hydroxide tech.
CAS: 20427-59-2

-  3.1/2/Inhal Acute Tox. 2 H330
-  3.1/4/Oral Acute Tox. 4 H302
-  3.3/1 Eye Dam. 1 H318
-  4.1/A1 Aquatic Acute 1 H400
-  4.1/C2 Aquatic Chronic 2 H411

1% - 3% Alkyl polyglycoside
CAS: 68515-73-1

-  3.3/1 Eye Dam. 1 H318

4. FIRST AID MEASURES

4.1 Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: denaturation of proteins with lesion at the level of the mucous membranes, renal and hepatic damage, CNS damage, emolysis. Vomit with emission of green material, gastro-oesophageal pyrosis, haematic diarrhea, abdominal colitis, haemolytic jaundice, hepatic and renal insufficiency, convulsions, collapse.

Fever caused by metal inhalation. Skin and eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment-

Therapy:

gastric lavage with a-lactalbumin solution, in case of high cupraemia use ligand compounds, penicillamine if the oral route is viable or intravenous CaEDTA and intramuscular BAL; for the rest symptomatic treatment.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2 Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases which, at high temperatures, may contain toxic substances such as HCl.

Burning produces heavy smoke.

5.3 Advice for fire-fighters

Use suitable breathing apparatus. Self-contained breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

6.2 Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3 Methods and material for containment and cleaning up

Wash with plenty of water.

6.4 Reference to other sections

See also section 8 and 13

7. HANDLING AND STORAGE

7.1 Precautions for safe handling:

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3 Specific end use(s)

None in particular

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Copper oxychloride tech. (57-58) - CAS: 1332-40-7

TLV TWA: 1 mg/m³ (as Cu)

Copper hydroxide tech. - CAS: 20427-59-2

TLV TWA: 1 mg/m³ (as Cu)

DNEL Exposure Limit Values

Not available

PNEC Exposure Limit Values

Not available

8.2 Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

None

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance and colour: Liquid paste, from light blue to green

Odour: Odourless

Odour threshold: Not relevant

pH: 9.19 (suspension 1% in water)

Melting point / freezing point: Not applicable

Initial boiling point and

boiling range: Not applicable

Solid/gas flammability: Not flammable (based on ingredients)

Upper/lower flammability

or explosive limits: Not relevant

Vapour density: Not applicable

Flash point: Not relevant

Evaporation rate: Not applicable

Vapour pressure: Not applicable

Relative density: 1.36 g/ml

Solubility in water: Insoluble

Lipid solubility: Insoluble

Partition coefficient

(n-octanol/water):	Not applicable due to salt insolubility
Auto-ignition temperature:	Not relevant
Decomposition temperature:	Not known
Viscosity:	Not applicable
Explosive properties:	Not explosive
Oxidizing properties:	Not oxidizing (based on ingredients)

9.2 Other information

Miscibility:	Not available
Fat Solubility:	Not available
Conductivity:	Not available
Substance Groups relevant properties	Not available

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

None

10.4 Conditions to avoid:

Stable under normal conditions.

10.5 Incompatible materials:

None in particular.

10.6 Hazardous decomposition products:

None.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Data referred to the *mixture*:

Acute toxicity:

LD50 (oral) (OECD 423; OPPTS 870,1000):

> 2000 mg/kg (rat)

LD50 (dermal) (OECD 402; OPPTS 870.1200):

> 2000 mg/kg (rat)

LC50 (4h) (inhalation) (OECD 403):

> 3.994 mg/L air (highest technically achievable aerosol)

Irritation power:

Acute skin irritation (OECD 404):

Not irritating (Male New Zealand White rabbit)

Acute eye irritation (OECD 405):

Irritant (Male New Zealand White rabbit)

Skin sensitisation (OECD 406):

Not sensitizer (Guinea Pig)

Data referred to *copper oxychloride*:

Carcinogenic effect (OECD 451):

No carcinogenic potential (test, rat)

No evidence of carcinogenic effects (ingestion) (man)

Mutagenic effect (OECD 474):
No evidence of mutagenic effect

Teratogenicity (EPA-TSCA 793400):
No evidence of teratogenic effect (test, rat)

Reproduction toxicity (OECD 416):
No evidence of reproduction toxicity

STOT-single exposure:
Not applicable

STOT-repeated exposure:
Not applicable

Aspiration hazard:
Not applicable

Data referred to *copper hydroxide*:

Carcinogenic effect (OECD 451):
No carcinogenic potential (test, rat)
No evidence of carcinogenic effects (ingestion) (man)

Mutagenic effect (OECD 474):
No evidence of mutagenic effect

Teratogenicity (EPA-TSCA 793400):
No evidence of teratogenic effect (test, rat)

Reproduction toxicity (OECD 416):
No evidence of reproduction toxicity

STOT-single exposure:
Not applicable

STOT-repeated exposure:
Not applicable

Aspiration hazard:
Not applicable

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Adopt good working practices, so that the product is not released into the environment.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Data referred to the *mixture*:

Fish –
Acute/chronic toxicity (OECD 203):
Onchorynchus mykiss,
LC50 (96 h) = 12.2 mg Cu/L
NOEC = 0.4 mg Cu/L

Invertebrates –
Acute/chronic toxicity (OECD 202):

Daphnia magna,
EC50 (48 h): 101 µg/L
NOEC (48 h): 38.5 µg/L

Algae-
Acute/chronic toxicity (OECD 201):
Desmodesmus subspicatus,
ErC50 (72h): 157.98 µg Cu/L
EyC50 (72h): 38.27 µg Cu/L

Bee -
Acute toxicity (OECD 213/214 (1998)):
Oral LD50 (24 h) = 18.6 µg a.i./bee
Contact LD50 (24 h) > 100 µg a.i./bee
Oral LD50 (48 h) = 15.6 µg a.i./bee
Contact LD50 (48 h) > 100 µg a.i./bee

Effets on soil macro-organisms:
Earthworms -
Acute toxicity:
LC50 > 1000 mg Cu/kg soil dry weight

12.2 Persistence and degradability

Data referred to *copper oxychloride tech. / copper hydroxide tech.*:
Stable to hydrolysis and not expected to be degraded by photolysis in water.
Not readily biodegradable.
BOD: not applicable
COD: not available

12.3 Bioaccumulative potential

Data referred to *copper oxychloride tech. / copper hydroxide tech.*:
Not applicable due to salt insolubility

12.4 Mobility in soil

Data referred to *copper oxychloride tech. / copper hydroxide tech.*:
Not available. Copper is considered weakly mobile in soil

12.5 Results of PBT and vPvB assessment

Not requested. No PBT and/or vPvB substance is contained in the preparation

12.6 Other adverse effects

None

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

14. TRANSPORT INFORMATION

14.1 UN number:

ADR-UN number: 3082
IMDG-Un number: 3082

14.2 UN proper shipping name:

ADR-Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.
N.O.S. (copper oxychloride and copper hydroxide)
IMDG-Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID.
N.O.S. (copper oxychloride and copper hydroxide)

14.3 Transport hazard class(es):

ADR-Class: 9
ADR-Label: 9
ADR - Hazard identification number: 90
IMDG-Class: 9

14.4 Packing Group:

ADR-Packing Group: III
IMDG-Packing group: III

14.5 Environmental hazards

Marine pollutant: Marine pollutant

14.6 Special Precautions for User

Limited Quantity: 5 L
IMDG-EMS: F-A, S-F
Tunnel Restriction Code: (E)

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

Not applicable

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances)
Dir. 99/45/EC (Classification, packaging and labelling of dangerous preparations)
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Dir. 2006/8/EC
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP)
Regulation (EU) n. 453/2010 (Annex I)
Regulation (EU) n. 286/2011 (ATP 2 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Where applicable, refer to the following regulatory provisions :

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.
Regulation (EC) nr 648/2004 (detergents).
1999/13/EC (VOC directive)

15.2. Chemical safety assessment

Not requested

16. OTHER INFORMATION

H-statements in section 3:

H302 Harmful if swallowed.
H332 Harmful if inhaled.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.
H330 Fatal if inhaled.
H318 Causes serious eye damage.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre,
Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van
Nostrand Reinold
CCNL - Appendix 1
Insert further consulted bibliography

The information contained herein is based on our state of knowledge at the above-specified date.
It refers solely to the product indicated and constitutes no guarantee of particular quality.
It is the duty of the user to ensure that this information is appropriate and complete with respect to
the specific use intended.

This MSDS cancels and replaces any preceding release.

This MSDS is in compliance with Reg. EC n. 453/2010

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
LTE:	Long-term exposure.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STE:	Short-term exposure.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.