



## Safety Data Sheet dated 25/1/2017, version 2

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

#### 1.1 Product Identifier

Mixture identification:

Trade name: KENTAN DF

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. (d/b/a Isagro USA, Inc.)  
430 Davis Drive, Suite 240, Morrisville, NC 27560"

Isagro S.p.A. - Via Caldera, 21 - 20153 MILANO - Italy  
For any further information about the content of this safety data sheet please write to:  
[msds@isagro.com](mailto:msds@isagro.com)

#### 1.4 Emergency telephone number

Tel.: 02 40 901 209 (Quality, Safety and Environment Department - Isagro S.p.A.)

For Chemical Emergency: Chemtrec- North America 1-800-424-9300; International 703-527-3887

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### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to U.S. Regulation

See section 15 for EPA signal word

##### Classification according to EU Regulation n. 1272/2006:

-  Warning, Acute Tox. 4, Harmful if swallowed.
-  Danger, Eye Dam. 1, Causes serious eye damage.
-  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

##### Classification according to U.S. Regulation

See section 15 for EPA signal word

##### Classification according to EU Regulation n. 1272/2006:

Symbols:



Danger

Hazard statements:

H302 Harmful if swallowed.

H318 Causes serious eye damage.

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.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

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

2.3. Other hazards

vPvB/PBT content: None

Other Hazards:

No other hazards

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### SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures


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


60% - 70% Copper hydroxide tech.

CAS: 20427-59-2

 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

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### SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Give nothing to eat or drink.

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

None

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:

None

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## SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO<sub>2</sub>).

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.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable 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.

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## SECTION 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

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## SECTION 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

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## SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters  
Idrossido di Rame - CAS: 20427-59-2  
TLV TWA - 1 mg/m<sup>3</sup> (come Cu)  
DNEL Exposure Limit Values  
N.A.  
PNEC Exposure Limit Values  
N.A.
- 8.2. Exposure controls  
Eye protection:  
Use close fitting safety goggles, don't use eye lens.  
Protection for skin:  
Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.  
Protection for hands:  
Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.  
Respiratory protection:  
Not needed for normal use.  
Thermal Hazards:  
None  
Environmental exposure controls:  
None

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties
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|--|--------------------------------------|
| Appearance and colour:                   | Light blueish colour                 |
| Odour:                                   | Odourless                            |
| Odour threshold:                         | Not relevant                         |
| pH:                                      | 6.5 (water suspension)               |
| 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:	1.02 g/ml (tap density)
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

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### 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.

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### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

Data referred to the *mixture*:

Acute toxicity:

LD50 (oral) (OECD 425 (2001) OPPTS 870,1000):

945 mg/kg (rat)

LD50 (dermal) (OECD 402 (1987); OPPTS 870.1200 (1998):

> 2000 mg/kg (rat)

LC50 (4h) (inhalation):

Not required

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 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

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## 12. ECOLOGICAL INFORMATION

Data referred to the *mixture*:

Fish –  
Acute/chronic toxicity (OECD 203):  
Onchorynchus mykiss,  
LC50 (96 h) = 2.37 mg Cu/L  
NOEC (96 h) = 0.295 mg Cu/L

Invertebrates –  
Acute/chronic toxicity (OECD 202):  
Daphnia magna,  
EC50 (48 h): 0.49 mg/L  
NOEC (48 h): 0.0441 mg/L

Algae-  
Acute/chronic toxicity (OECD 201):  
Desmodesmus subspicatus),  
ErC50 (72h): 13.07 mg Cu/L  
EyC50 (72h): 0.188 mg Cu/L

Bee -  
Acute toxicity (OECD 213/214 (1998):  
Oral LD50 (24 h) = 21.8 µg Cu/bee  
Oral LD50 (48 h) = 10.5 µg Cu/bee

Contact LD50 (24 h) > 150 µg Cu/bee  
Contact LD50 (48 h) > 150 µg Cu/bee

#### 12.2 Persistence and degradability

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

#### 12.4 Mobility in soil

Data referred to *copper hydroxide tech. grade*:  
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

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### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

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### 14. TRANSPORT INFORMATION

#### 14.1 UN number:

ADR-UN number: 3077  
IMDG-Un number: 3077

#### 14.2 UN proper shipping name:

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

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### SECTION 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. 830/2015  
Regulation (EU) n. 286/2011 (ATP 2 CLP)  
Regulation (EU) n. 618/2012 (ATP 3 CLP)  
Regulation (EU) n. 487/2013 (ATP 4 CLP)  
Regulation (EU) n. 944/2013 (ATP 5 CLP)  
Regulation (EU) n. 605/2014 (ATP 6 CLP)

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

According to U.S. regulations:

Federal Regulations

Registration Status:

Crop Protection TSCA, US released / exempt

State Regulations

CA Prop 65:

There are no listed chemicals in this product.

NFPA Hazard Codes:

Health: 1      Fire: 0      Reactivity: 0 Special

Labeling requirements under FIFRA:

This chemical is a pesticide product registered by the US Environmental Protection Agency (EPA) and is subject to certain labeling requirements under federal pesticide laws. These requirements differ from the classification criteria and hazard information required for the safety data sheets and workplace labels of non-pesticide chemicals. The following is the hazard information as required on the pesticide label.

EPA Registration No.: 80289-2

**DANGER / PELIGRO**

Keep out of Reach of Children

Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing dust.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.



Mixers, loaders, applicators, and other handlers must wear the following:

- long-sleeved shirt and long pants
- shoes plus socks
- goggles or faceshield
- chemical-resistant gloves such as Natural Rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

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

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#### SECTION 16: Other information

H-statements in section 3:

- H302 Harmful if swallowed.
- H318 Causes serious eye damage.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.
- H332 Harmful if inhaled.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

Sections modified with reference to the previous revision:

- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 15. REGULATORY INFORMATION

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.

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.
EPA:	Environmental Protection Agency
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.
TSCA:	Toxic Substances Control Act
TLV:	Threshold Limiting Value.
TWATLV:	Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
WGK:	German Water Hazard Class.
N.A.:	N.A.
N.D.:	