



MATERIAL SAFETY DATA SHEET

VIRIKOP

Date Issued: July 2014 and is valid for 3 years from this date.

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Revision No.: 2

Print Date: 3/10/14

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: VIRIKOP

SUPPLIER: EFEKTO

PO BOX 652147

BENMORE

2010

TEL No. 011 287 5700

EMERGENCY TELEPHONE NUMBERS:

SPILLAGES: 083 1233 911

Fax: 086 685 3129

POISONINGS:

National Poison Centre 021-9386084 (office hours).

021-9316129 (after hours).

082 446 8946

Use: A preventative copper-based fungicide for home garden use.

2. HAZARDS IDENTIFICATION

- Irritant

Human health:

Acute poisoning from the ingestion of copper salts is rarely severe, if the metal is removed promptly by emesis.

Likely routes of exposure:

Eye contact, skin contact, ingestion, and inhalation.

Skin Contact:

Moderate irritation. On the skin, copper salts also act as irritants producing itching eczema.

Eye Contact:

Moderate eye irritant. May cause allergic conjunctivitis.

Ingestion:

Harmful if swallowed. Acute ingestion of copper salts may cause severe nausea and vomiting, abdominal pain, hemolysis, and gastrointestinal bleeding.

Inhalation:

Inhalation of dust and mists of copper salts can result in irritation of nasal mucous membranes, sometimes of the pharynx and, on occasion, ulceration with perforation of the nasal septum.

Symbol: Xn; N

R phrases: R22, R51/53

UN No.: 3077



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Class: 9

3. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredients:

Active ingredients.	CAS No.:	EC No.:
Copper oxychloride (500 g/kg as Copper)	1332-65-6	215-572-9

Chemical Name: Dicopper chloride trihydroxide

Chemical Family: Copper oxychloride

Chemical Formula: $Cl Cu_2 H_3 O_3$

NIOSH/RTECS No.: Not available.

4. FIRST-AID MEASURES

Skin Contact:

Wash the affected area with soap and water.

Eye Contact:

Flush/irrigate eyes with copious amounts of water for at least 10 minutes.

Ingestion:

Gastroenteritis may occur following ingestion of some copper salts. Vomiting may occur within 15 minutes of ingestion. Vomitus is characteristically greenish-blue.

Emesis is rapid and spontaneous in most patients following ingestion of copper salts.

Obtain medical attention if more than a small quantity has been swallowed or when relevant symptoms occur after swallowing.

Inhalation:

Remove patient to fresh air.

Advice to physician: There is no antidote. Treat symptomatically. Ipecac is CONTRAINDICATED after ingestion of caustic copper salts because of the risk of further injury to the gastrointestinal mucosa and the possibility of severe CNS changes.

5. FIRE-FIGHTING MEASURES

Extinguishing agents:

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Extinguish small fires with water, carbon dioxide, dry powder, or alcohol-resistant foam.

Firefighting:

Remove containers from fire area if possible. Contain fire control agents for later disposal. Use a recommended extinguishing agent. Water can be used to cool unaffected containers. Avoid inhaling hazardous vapours. Keep upwind.

Personal protective equipment:



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Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spillage:

Any spillage of this product should be swept up and placed in a clean, labelled open container for safe disposal. Depending on the degree and nature of contamination, dispose of by sending to an authorised waste disposal facility.

Environmental precautions:

Take care to avoid the contamination of watercourses and drains and inform the appropriate authority in case of accidental contamination of watercourses.

7. HANDLING AND STORAGE

Handling:

Wash hands before eating, drinking, chewing gum or smoking.

Storage:

To maintain the quality, store in cool covered warehouse at temperatures between 0° and 30° C. Keep containers tightly closed, in a well-ventilated place. Store away from food, drink and animal feeding stuffs. Keep away from children. Adhere to local regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits:

8 hr Time Weighted Avg (TWA) 1 mg/cu m /Copper dusts & mists, as Cu/; 8 hr Time Weighted Avg (TWA) 0.2 mg/cu m /Copper fume.

Engineering controls:

In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify the process or environment to reduce the problem.

Precautionary and engineering measures:

Avoid excessive contact with product.

Personal Protection

Wear suitable gloves when handling the product over long periods.

After handling product, wash hands and observe good hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Powder.

Colour:

Green to bluish



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Odour: None.
Bulk density: 3.75
pH: Not applicable.
Solubility at 20°C (g/L): Will mix with water.

10. STABILITY AND REACTIVITY

Stability:

Stable for at least two years.

Reactivity:

Mild reaction to very strong oxidising agents.

11. TOXICOLOGICAL INFORMATION

Oral LD₅₀ Rat: 700 - 800 mg/kg
Dermal LD₅₀ Rat: >2000 mg/kg
Inhalation LC₅₀: > 30 mg/l
Eye irritation: Moderate irritant.
Skin: Moderate skin irritant. May cause allergic irritation.
Skin sensitization: A form of contact dermatitis associated with copper has been reported
Chronic effects: Chronic copper poisoning due to excessive intake is rarely recognized in man.
Cancer information: The ingredients are not listed as carcinogenic in Worksafe's document "Exposure Standards for Atmospheric Contaminants in the Occupational Environment" (May 1995).
Teratology (Birth defects): No data available
Reproductive effects: No data available
Mutagenicity: No data available

12. ECOLOGICAL INFORMATION

Toxic to Fish, Daphnia and algae.

LC₅₀

Carp: 2, 2 mg/l

Daphnia: 3, 5 mg/l

Bees: Not toxic to bees.

Algae-Scenedesmus Subspicatus, EC₅₀ (72h): 56.3 mg/l

13. DISPOSAL CONSIDERATIONS

Product: Use unused product as per label instructions. Dispose of whilst observing local legal regulations. E.g. in a suitable landfill site.

Packaging: Triple rinse empty container.



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14. TRANSPORT INFORMATION

UN NUMBER: 3077

ADR:

Proper shipping name: Environmentally hazardous substance, solid n.o.s. (copper oxychloride)

Classification code: M 7

Class: 9

Packaging group: III

Hazard ID: 90

IMDG:

Proper shipping name: Environmentally hazardous substance, solid n.o.s. (copper oxychloride)

Class: 9 **Marine Pollutant**

Packaging group: III

IATA:

Proper shipping name: Environmentally hazardous substance, solid n.o.s. (copper oxychloride)

Packaging group: III

Label: Miscellaneous.

Passenger aircraft: Y911 (30 kg); 911 (no limit kg)

Cargo: 911 (no limit)

Tremcard No: 90GM7-III

15. REGULATORY INFORMATION

Symbol: Xn; N

Indication of danger: Harmful; Dangerous for the environment

Risk phrases:

R22 Harmful if swallowed.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S 1/2 Keep locked up and out of reach of children.

S13 Keep away from food, drink and animal feeding stuffs.

S22 Do not breathe dust.

S25 Avoid contact with eyes.

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.



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National legislation: In accordance with the South African National Road Traffic Act, 1996 (Act 93 of 1996), the Fire Brigade Act, 1987 (Act 99 of 1987) and the Occupational Health and Safety Act, 1993 (Act. No. 85 of 1993)

16. OTHER INFORMATION

Compiled by: Danie Fourie

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

REFERENCES

- ACCENSI Pty Ltd MSDS, 2008.
- ISAGRO S.p.A. MSDS, 2004
- ADR 2011, Part 3.
- IMDG Code, 2005 Edition, Vol. 2.
- IATA Dangerous goods regulations, Effective 1 January 2011

END OF MSDS.