



MATERIAL SAFETY DATA SHEET

KUMULUS

Date Issued: April 2014

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Revision No.: 1

Print Date: 1/4/19

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: KUMULUS

SUPPLIER: EFEKTO

PO Box 652147
BENMORE
2010

TEL No. 0861 333 586 office hours

EMERGENCY TELEPHONE NUMBERS:

SPILLAGES: 082 446 8946

POISONINGS:

Poisons Information Helpline 0861 555 777 (all hours)

Griffon Poison Centre 082 446 8946

Use: A fungicide/insecticide for the control of certain insects, mites and fungus diseases as indicated on the product label.

2. HAZARDS IDENTIFICATION

- Irritant.

Likely routes of exposure:

Eye contact, skin contact, ingestion, and inhalation.

General:

No adverse health effects are expected when the product is used in accordance with label directions.

Acute

Ingestion:

The acute oral toxicity is Low. However sulphur is a severe irritant to the stomach when ingested.

Eye: Severe eye irritant.

Skin: The acute dermal toxicity is low.

inhaled: The acute inhalation toxicity is low. Sulphur is a mild irritant if inhaled.

Chronic:

No adverse health effects are expected when the product is used in accordance with label directions.

Symbol: Xi

Indication of danger: Irritant

Risk Phrase: R38

UN No.: Not regulated.



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3. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredients:

Active ingredients.	CAS No.:	EC No.:
Sulfur 80.0 %	7704-34-9	231-722-6

Chemical Name: Sulphur

Chemical Family: Sulphur

Chemical Formula: S

NIOSH/RTECS No.: -

4. FIRST-AID MEASURES

If inhaled:

Keep patient calm, remove to fresh air. Seek medical attention if necessary.

On skin contact:

After contact with skin, wash immediately with plenty of water and soap. If irritation develops, seek medical attention.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth immediately and then drink plenty of water, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Note to physician:

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water spray, foam, dry powder, carbon dioxide

Specific hazards: Sulphur oxides

Special protective equipment: Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES



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Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Remove contaminated clothes, undergarments and shoes immediately.

Methods for cleaning up or taking up:

For large amounts: Sweep/shovel up. For residues: Contain with dust binding material and dispose of. Cleaning operations should be carried out only while wearing breathing apparatus. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Collect waste in suitable containers, which can be labeled and sealed. Incinerate or take to a special waste disposal site in accordance with local authority regulations.

7. HANDLING AND STORAGE

Handling:

No special measures necessary if stored and handled correctly.

Protection against fire and explosion:

Avoid dust formation. Avoid deposition of dust. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Dust can form an explosive mixture with air.

Storage:

Segregate from foods and animal feeds.

Further information on storage conditions: Protect against moisture. Keep away from heat. Protect from direct sunlight.

Storage stability:

Storage duration: 60 Months

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection:

Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2) Breathing protection if breathable aerosols/dust are formed. Wear respiratory protection if ventilation is inadequate.

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other Eye protection: Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:



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The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended. Keep away from food, drink and animal feeding stuffs. Remove contaminated clothing. No eating, drinking, smoking or tobacco use at the place of work. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: A solid. Low dusting fine granules.
Colour: Grey-brown
Odour: Faint specific odour, sulfur-like.
pH value: approx. 9 (1 % (m), 20 °C)
Melting point: 112.6 - 116 °C
Flash point: 210 °C
Flammability: Not highly flammable (Directive 92/69/EEC, A.10)
Self ignition: Not self-igniting.
Minimum ignition energy: 0 - < 10 mJ
Fire promoting properties: Not fire-propagating.
Vapour pressure: Negligible
Density: Approx. 1.88 g/cm³(20 °C)
Relative density: 1.88 (20 °C)
Bulk density: 870 - 953 kg/m³
Solubility in water: Dispersible.
Partitioning coefficient n-octanol/water (log Pow): Not applicable
Surface tension: 72.9 mN/m (20 °C; 0.1 % (V))
72.3 mN/m (20 °C; 0.7 % (V))

Viscosity, dynamic: Not applicable.
Viscosity, kinematic: Not applicable.
Grain size distribution: Particles >= 500 µm <= 10 %
Particles <= 75 µm <= 10 %
Particles <= 50 µm 2.2 %

10. STABILITY AND REACTIVITY

Thermal decomposition: 190 °C (VDI 2263, sheet 1, 1.4.1)

No decomposition if stored and handled as prescribed/indicated.

Corrosion to metals: No data available.

Hazardous reactions:

No hazardous reactions if stored and handled as prescribed/indicated.

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated



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11. TOXICOLOGICAL INFORMATION

Acute toxicity

Experimental/calculated data:

LD₅₀ rat (oral): > 2,200 mg/kg (OECD Guideline 401)

LC₅₀ rat (by inhalation): > 5.4 mg/l 4 h (OECD Guideline 403)

LD₅₀ rat (dermal): > 2,000 mg/kg (OECD Guideline 402)

Irritation

Experimental/calculated data:

Skin corrosion/irritation rabbit: Non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: Non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization

Experimental/calculated data: Guinea pig maximization test guinea pig: Skin sensitizing effects were not observed in animal studies.(OECD Guideline 406)

Other relevant toxicity information: Misuse can be harmful to health.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to fish:

LC₅₀ (96 h) > 5,000 mg/l, *Salmo gairdneri*, syn. *O. mykiss* (static)

No observed effect concentration (28 d) 32 mg/l, *Oncorhynchus mykiss* (OECD Guideline 204, Flow through.)

Aquatic invertebrates:

EC₅₀ (48 h) > 1,000 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Aquatic plants:

EC₅₀ (72 h) 290 mg/l, *Ankistrodesmus bibraianus* (OECD Guideline 201)

Microorganisms/Effect on activated sludge:

EC₅₀ (18 h) > 2,000 mg/l, *Pseudomonas putida* (static)

Persistence and degradability:

Information on: sulfur

Assessment biodegradation and elimination (H₂O):

Inorganic product which cannot be eliminated from water by biological purification processes

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. DISPOSAL CONSIDERATIONS

Must be disposed of or incinerated in accordance with local regulations.

14. TRANSPORT INFORMATION



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UN No.: Not regulated.

15. REGULATORY INFORMATION

Symbol: Xi

Indication of danger: Irritant

Risk phrases:

R 38 Irritating to skin.

Safety phrases:

S2 Keep out of the reach of children.

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

S20/21 When using do not eat, drink or smoke.

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

- BASF Kumulus MSDS,14/10/ 2010 revision.
- ECB-ESIS (European chemical Information System).
- ADR 2011, Part 3.
- IMDG Code, 2005 Edition, Vol. 2.
- IATA Dangerous goods regulations, Effective 1 January 2011

END OF MSDS.