



MATERIAL SAFETY DATA SHEET

FENDONA SC

Date Issued: March 2019.

Revision: 3 Page 1 of 8

Print Date: 5/4/19

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME:FENDONA SC

SUPPLIER: EFEKTO

PO BOX 652147

BENMORE

2010

TEL No. 0861 333586 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 long lasting suspension concentrate contact and stomach insecticide for the control of various insects for public health.

2. HAZARDS IDENTIFICATION

- May cause paraesthesia.
- Very toxic to aquatic organisms.

Eye contact: Not irritating

Skin contact: May cause paraesthesia.

Ingestion: Harmful if ingested. See point 4 for symptoms.

Inhalation: Harmful by inhalation. See point 4 for symptoms.

Reproductive hazard/ Carcinogenicity/ Mutagenicity: None.

Symbol: Xn; N

Risk-phrase(s): R37, R48/22, R50/53

UN No.: 3082

Class: 9

3. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredients:



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Active ingredients.	CAS No.:	EC No.:
Alpha Cypermethrin 60 g/l	67375-30-8	257-842-9
Inerts Balance		

Chemical Name: A racemate containing (*S*)- α -cyano-3-phenoxybenzyl (1*R*,3*R*),3*SR*)-3-(2,2dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate. (IUPAC)

Chemical Family: Pyrethroid

Chemical Formula: $C_{22}H_{19}Cl_2NO_3$

NIOSH/RTECS No.: GZ1250000

4. FIRST-AID MEASURES

Symptoms of poisoning:

Effects from overexposure result from swallowing, breathing or coming in contact with the eyes and skin. Symptoms of overexposure include numbness and tingling of hands and feet, lung oedema and convulsions. These sensations are reversible and usually subside within 24 hours.

Inhalation:

Remove the source of contamination or move victim to fresh air. The patient should be kept under observation and transported to a health center if necessary.

Skin contact:

Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and non-abrasive soap.

Eye contact:

Immediately flush eyes with a stream of clean water for at least 20 minutes, holding the eyelid(s) open.

Ingestion:

If only small amounts have been ingested, or if treatment has been delayed, oral administration of activated charcoal and cathartic probably represents optimal management. Never give anything by mouth to an unconscious person.

Note to physician:

No known specific antidote.

Do not administer milk, cream or other substances, which contain vegetable or animal fats, as they enhance absorption of the active ingredient. Central nervous system stimulation can be controlled with sedation by eg. Barbiturates.

Reversible skin sensations (paraesthesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care

5. FIRE-FIGHTING MEASURES

Fire and explosion hazard: Product is not flammable.

Extinguishing agents:



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Extinguish small fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for firefighting for later disposal.

Firefighting:

Remove spectators from surrounding area. Remove container from fire area if possible. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Water can be used to cool unaffected containers but must be contained for later disposal. Avoid inhaling hazardous vapours. Keep upwind.

Personal protective equipment:

Fire may produce irritating or poisonous vapours (toxic fumes of hydrogen cyanide, chlorine, and oxides of nitrogen and carbon), mists or other products of combustion. Fire-fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see Section 8.

Environmental precautions:

Do not allow entering drains or watercourses. When the product contaminates public waters, inform appropriate authorities immediately in accordance with local regulations.

Occupational spill:

For small liquid spills, soak up with lime, damp earth or sand, or other noncombustible absorbent material and place into containers for later disposal. For large liquid spills, contain the liquid for later disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away.

7. HANDLING AND STORAGE

Handling:

Harmful by skin or eye contact, inhalation or ingestion. Avoid contact with eyes and skin, and inhalation of spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the insecticide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage:

Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original labeled container in isolated, dry, cool and well-ventilated area.

Protect from temperatures below: -10 °C. The product can crystallize below the limit temperature.

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.

Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION



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Occupational exposure limits:

None established.

Engineering control measures:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations. If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

PERSONAL PROTECTIVE EQUIPMENT:

Respirator:

An approved respirator suitable for protection from dusts and mists of pesticides is adequate. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

Clothing:

Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

Gloves:

Workers must wear appropriate synthetic protective gloves to prevent contact with this substance.

Eye protection:

The use of safety goggles is recommended.

Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: A white liquid.

Odour: Slight chemical

Flammability: Not flammable.

Explosive properties: Not explosive.

Flash point: Not applicable.

pH: 6, 03 - 6, 27[1% Dilution]

Density: 1,02g/ml at 20 °C

Viscosity: 1910 mPa/s

Solubility in water: This formulation will mix with water.

10. STABILITY AND REACTIVITY

Stability:

Stable in neutral and acidic media (optimum is pH 4), but hydrolysed by alkalis. The product is stable in light and water.

Incompatibility:

Avoid packaging in plain mild steel, plain tinplate or other metals. Compatible with many insecticides, but incompatible with alkaline substances. The product should therefore not be used if the water has high pH values.



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A compatibility test is required before using with other products. Do not physically mix concentrate directly with other herbicides or pesticide concentrates; always dilute first.

Thermal decomposition:

Toxic fumes of hydrogen cyanide, chlorine, and oxides of nitrogen and carbon are produced when the product decomposes on heating.

11. TOXICOLOGICAL INFORMATION

Acute oral LD₅₀ : >5000 mg/kg in rats.

Acute dermal LD₅₀ : > 2000 mg/kg in rats.

Acute inhalation LC₅₀ (technical product): > 0,32 mg/ℓ of air over 4 hours (rats). No data for formulation.

Acute skin irritation: The product is not a skin irritant.

Acute eye irritation: The product is not an eye irritant.

Dermal sensitisation: The product is not a skin sensitizer.

Carcinogenicity: No evidence.

Teratogenicity: Studies did not detect any teratogenic effects.

Mutagenicity: Alpha-cypermethrin is not mutagenic.

12. ECOLOGICAL INFORMATION

No eco-toxicity data exists for this formulation. The data given is for the active ingredient

The physical and environmental properties as well as the environmental toxicology of Alpha-cypermethrin are similar to cypermethrin. Unless indicated the information below pertains to cypermethrin.

Data for technical material.

ECOTOXICOLOGY:

Birds:

Japanese quail *Coturnix coturnix japonica*: Dietary toxicity :); Dosage: 5000 ppm; 5 days, purity 97.83%; LC₅₀ >5000 ppm.

Northern bobwhite quail (*Colinus virginianus*):

Highest dose (2025 mg a.s. /kg body weight) caused no compound-related mortality (BASF).

Northern bobwhite quail Dietary toxicity: LC₅₀ >5000 mg a.s./kg diet NOEC = 5000 mg a.s./kg diet (BASF).

Northern bobwhite quail Sub-chronic toxicity and reproduction: NOEC =150 mg a.s./kg diet (BASF)

Fish :

Rainbow trout *Salmo gairdneri* LC₅₀ = 2.8 µg/l

NOEC = 1.5 µg/l (BASF).

Common carp *Cyprinus carpio* LC₅₀ = 0.00084 (0.0007-0.0009) mg/l (Tagros).

Fish early life stage toxicity:

Fathead minnow *Pimephales promelas* NOEC = 0.25 µg/l (BASF)

BCF: Bioaccumulation factor calculated as 1204, uptake rate constant of 0.11/L water/g fish, depuration rate constant 0.09 L water/g fish/day. Cypermethrin rapidly taken up and eliminated, **alpha cypermethrin expected to be similar.** (BASF)



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Daphnia:

Daphnia magna (water flea) Acute immobilization test: EC₅₀ (48 h) = 0.57 µg/l (0.50-0.64 µg/l).

Chronic toxicity: 21 d, semi-static test system with renewal after 24 h; NOEC = 0.03 µg/l (BASF).

Algae LC₅₀:

Growth inhibition test:

***Pseudokirchneriella subcapitata* (green alga):**

Effect on biomass: EbC₅₀ (0-72 h) >1 mg/l; EbC₁₀ (0-72 h) <0.05 mg/l

Effect on growth rate: ErC₅₀ (0-72 h) >1 mg/l; ErC₁₀ (0-72 h) >1 mg/l (BASF).

***Chlorella vulgaris* (green alga):** EC₅₀ = 15.26 µg/ml (Tagros)

Bees:

Acute oral toxicity = 0.015 µg/bee (48 h)

Acute contact toxicity = 0.010 µg/bee (48 h)

Although alpha-cypermethrin was toxic in acute tests in which honey bees were directly exposed to fresh residue, the results from numerous field tests indicate that application of alpha-cypermethrin is of low risk to honey bees. This is because direct exposure to alpha-cypermethrin, through contact and ingestion, is very limited due to its repellent effect on foraging bees.

Earthworms:

***Eisenia foetida* (earthworm):** 14-day LC₅₀ >100 mg a.s./kg Soil; NOEC = 100 mg/kg soil (BASF).

Soil micro-organisms:

Nitrogen mineralization: Effects less than 25% after 28 days, at 30, 150 and 300 g a.s./ha

Carbon mineralization: Effects less than 25% after 28 days, at 30, 150 and 300 g a.s./ha

Mobility:

Based on its Koc value, alpha-cypermethrin binds tightly to soil, making it almost immobile in most soil types.

DT₅₀:

The half-life for alpha-cypermethrin in soil under aerobic conditions at 25 °C ranged from 20 days to 24 weeks.

The half-life for alpha-cypermethrin when subjected to photolysis conditions on a soil surface was 31 days.

Hydrolysis was responsible for part of this decline rate.

13. DISPOSAL CONSIDERATIONS

Pesticide disposal:

Dispose of in government approved landfill site.

Contaminated absorbents, surplus product, etc., should be burned in a high- temperature incinerator (> 1000 °C) with effluent gas scrubbing.

Where no incinerator is available, hydrolysis under alkaline conditions (pH 12 or above) is a suitable method to dispose of small quantities of the product. Before disposal of the resultant waste, the material must be analysed to ensure that the active ingredient has been degraded to a safe level. Never pour untreated waste or surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Comply with local legislation applying to waste disposal.

Package product wastes:

Containers must be triple rinsed before disposal. Add rinsing to spray tank. DO NOT dispose of undiluted chemicals on-site. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for



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this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

UN NUMBER: 3082

ADR/RID:

Proper shipping name: Environmentally hazardous substance, liquid n.o.s (alpha-cypermethrin 6%)

Classification Code: M6

Class: 9

Packaging group: III

Hazard ID: 90

IMDG/IMO

Shipping name: Environmentally hazardous substance, liquid n.o.s (alpha-cypermethrin 6%)

Packaging group: III

Label of class: 9 **MARINE POLLUTANT**

AIR/IATA

Shipping name: Environmentally hazardous substance, liquid n.o.s (alpha-cypermethrin 6%)

Class: 9

Packaging Group: III

Passenger Aircraft 914 (No Limit) Y914 (max 30kg)

Cargo Aircraft 914 (No Limit)

Tremcard number 90GM6-III

15. REGULATORY INFORMATION

Symbol: Xn N

Indication of danger: Harmful; Dangerous to the environment.

Risk phrase(s):

R37 Irritating to respiratory system.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrase(s):

S2 Keep out of the reach of children.



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- S13** Keep away from food, drink and animal feeding stuffs.
- S20/21** When using do not eat, drink or smoke.
- S35** This material and its container must be disposed of in a safe way.
- S36/37** Wear suitable protective clothing and gloves.
- S46** If swallowed, seek medical advice immediately and show this container or label.
- S57** Use appropriate container to avoid environmental contamination.

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

Regulatory Information

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 STEDFAST MSDS,04/02/2008
- The Pesticide Manual; Thirteenth Edition; Editor Clive Tomlin; Crop Protection Publications, 2003.
- ADR 2011, Part 3.
- IMDG Code, 2005 Edition, Vol. 2.
- IATA Dangerous goods regulations, Effective 1 January 2011

END OF MSDS