



MITIGATE

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name: MITIGATE
Insecticide

UN No. 2903

Supplier: ISAGRO SOUTH AFRICA
33 Lillbester St
Brackenhurst, 1448, South Africa

Distributor: Villa Crop Protection (Pty) Ltd.
PO Box 10413,
ASTON MANOR, 1630, South Africa

Telephone: (011) 3962233

Fax: (011) 3964666

Website: www.villacrop.co.za

Emergency telephone: (011) 396 2233

24 Hr Emergency Numbers:
Griffon Poison Information Centre 082 446 8946
Bateleur: 083 1233 911 or
(Client: Villa Crop Protection) 0860 333 911

In case of Poisoning:
Red Cross Poison Information Centre: 021 689 5227
Tygerberg Poison Information Centre: 021 931 6127

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components within the meaning of EEC directive 67/548 and corresponding classification:

25 % - 30 % 1,2,4-trimethylbenzene
N.67/548/CEE:601-043-00-3 CAS: 95-63-6 EC: 202-436-9
Xn, Xi, N; R10-20-36/37/38-51-53

7% - 10% 1,3,5-trimethylbenzene
N.67/548/CEE:601-025-00-5 CAS: 108-67-8 EC: 203-604-4
Xn, N; R10-37-51-53

5% - 7% Cumene [1]
N.67/548/CEE:601-024-00-X CAS: 98-82-8 EC: 202-704-5
Xn, Xi, N; R10-37-51-53-65

5% - 7% FENPYROXIMATE
T+, Xn, Xi, N, R22-26-36-43-50-53

1% - 3% Xylene [4]
N.67/548/CEE:601-022-00-9 CAS: 1330-20-7 EC:215-535-7
Xn, Xi, R10-20/21-38

3. HAZARD IDENTIFICATION

The product is harmful following acute exposure to it and poses a serious health threat if inhaled. If brought into

contact with the eyes, the product causes considerable irritation which can last for over 24 hours.

If brought into contact with the skin, the product may cause sensitisation of the skin. This product is a threat to the environment; it is highly toxic for aquatic organisms following acute exposure. In the long term this product may have negative effects on the aquatic environment, because it is not easily biodegradable and/or is bio-accumulable.

4. FIRST AID MEASURES AND PRECAUTIONS

Inhalation:

Ventilate the premises. The patient is to be removed immediately from the contaminated premises to rest in a well ventilated area. **OBTAIN MEDICAL ATTENTION.**

Contact with skin:

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.

Contact with eyes:

Wash immediately and thoroughly with running water, keeping eyelids raised, for at least 10 minutes. Following this, protect the eyes with sterile gauze or a clean, dry, handkerchief. **OBTAIN A MEDICAL EXAMINATION.**

Swallowing:

Do not under any circumstances induce vomiting. **OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.** Give liquid paraffin to drink; do not give milk or animal or vegetable fats of any kind.

5. FIRE FIGHTING MEASURES

Recommended extinguishers:

Water, CO₂, Foam, Chemical powders, according to the materials involved in the fire.

Extinguishers not to be used:

None in particular.

Risks arising from combustion:

Avoid inhaling the fumes which at high temperatures may contain toxic substances such as CO_x and NO_x.

Protective equipment:

Use protection for the respiratory tract. Self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Measures for personal safety:

Use a mask, gloves and protective clothing.



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Environmental measures:

Limit leakages with earth or sand. If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities.

Cleaning methods:

Rapidly recover the product. To do so, wear a mask and protective clothing. If the product is in a liquid form, stop it from entering the drainage system. Recover the product for re-use if possible, or for elimination. The product might, where appropriate, be absorbed by inert material. After the product has been recovered, rinse the area and materials involved with water.

7. HANDLING AND STORAGE

Handling precautions:

Avoid contact and inhalation of the vapours. See paragraph 8 below. Do not eat or drink while working.

Incompatible materials:

None in particular.

Storage conditions:

Instructions as regards storage premises: Adequately ventilated premises.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Precautionary measures:

Give adequate ventilation to the premises where the product is stored and/or handled.

Respiratory protection:

Use adequate protective respiratory equipment, e.g. CEN/FFP-2(S) or CEN/FFP-3(S).

Protection for hands:

Use protective gloves that provide comprehensive protection, e.g. P.V.C., neoprene or rubber.

Eye protection:

Use close fitting safety goggles and/or visor conforming to BS 2092 GRADE (1).

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Exposure limit(s) (ACGIH):

1,2,4-trimethylbenzene

VLE 8h: 100mg/m³ – 20ppm

1,3,5-trimethylbenzene

VLE 8h: 100mg/m³ – 20ppm

Cumene [1]

VLE 8h: 100mg/m³ – 20ppm VLE short: 250mg/m³ – 50ppm TLV TWA: 50ppm – 245,79mg/m³

Xylene [4]

VLE 8h: 221mg/m³ – 50ppm BLE short: 442mg/m³ – 100ppm TLV TWA: 100ppm, A4-434,19mg/m³, A4 TLV STEL: 150ppm, A4-651, 29 mg/m³, A4.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and colour:

Pale yellow liquid.

Non-flammable.

pH:

6.13 at 25°C

Relative density:

1.006 kg/l at 20°C.

Solubility in water:

1.5 x 10 mg/l (at 25°C)

Lipid solubility:

Soluble in chloroform and tetrahydrofuran (referred to **Fenpyroximate**)

Partition c. (n-octanol/H₂O):

Log P = 5.01 (at 20°C) (referred to **Fenpyroximate**)

10. STABILITY AND REACTIVITY

Conditions to avoid:

Stable under normal conditions.

Substances to avoid:

None in particular.

Hazardous decomposition products:

It may generate flammable gases on contact with elementary metals (alkalis and alkaline earth), and nitrides. It may catch fire on contact with oxidising mineral acids, powerful oxidising agents, and powerful reducing agents.

11. TOXICOLOGICAL INFORMATION

The concentration of each substance should be borne in mind in assessing the toxicological effects deriving from the preparation.

MITIGATE.

Data referred to preparation:

LD50 (oral): 810 mg/kg (rat, male);

LD50 (dermal): >2000 mg/kg (rat, male and female);

LC50 (4h) (inhalation); 2.3 mg/l air (rat, male);

Irritating power:

Moderately irritating to eyes.

Sensitization:

May cause sensitization by skin contact.

Sub-chronic (target organ effects):

Results from 90-day animal studies suggest no target organ effects under the conditions of normal handling and use.

Chronic cancer information:

In two year feeding studies with **Fenpyroximate** in rats, no organo-toxic effects were observed at dose levels up to 150 ppm. At dose levels of 75 and 150 ppm in both male and female rats, reduced body weight gains were seen.

Fenpyroximate had no significant effect on mortality and was not carcinogenic at any of the doses tested. Similar results were observed in dogs administered up to 15



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mg/kg/day. **Fenpyroximate** was not oncogenic in mice at dose levels up to 800 ppm.

Teratogenicity (birth defects):

Fenpyroximate technical demonstrated no treatment-related teratogenic effects in rabbit at oral dose levels up to 5mg/kg/day, nor in rats at dose levels up to 25 mg/kg/day.

Reproductive effects:

Fenpyroximate technical demonstrated no adverse effects on reproductive performance in a two generation rat reproduction study at dietary doses up to 100 ppm.

Neurotoxicity:

Data not available.

Mutagenicity (genetic effects):

Fenpyroximate technical was not mutagenic or genotoxic when tested in the Ames gene mutation assay, Chinese hamster V79 Forward Mutation, mouse micronucleus and cultured human lymphocytes for chromosomal aberration, nor in the unscheduled DNA synthesis assay.

12. ECOLOGICAL INFORMATION

Adopt good working practices, so that the product is not released into the environment.

Data referred to preparation:

Fish-

Carp, LC50 (96h): 0.0055 mg/l

Daphnia-

EC50 (48h): 0.00326 mg/l

Algae-

Pseudokirchneriella subcapitata, EC50 (72h): 9.98 mg/l

List of substances dangerous for the environment and corresponding classification:

25% - 30% 1,2,4-trimethylbenzene

N.67/548/CEE:601-043-00-3 CAS: 95-63-6 EC: 202-436-9 R51/53 Toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

7% - 10% - 1,3,5-trimethylbenzene

N.67/548/CEE:601-025-00-5 CAS: 108-67-8 EC: 203-604-4

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

5% - 7% - Cumene [1]

N.67/548/CEE:601-024-00-X CAS: 98-82-8 EC: 202-704-5

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

5% - 7% - FENPYROXIMATE

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

13. DISPOSAL CONSIDERATION

Pesticide and container disposal:

Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be re-used or reprocessed. Never pour untreated waste or

surplus products into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers.

Comply with local legislation applying to waste disposal.

Container disposal:

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

TRIPLE RINSE empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of 10 % of that of the container. Add the rinsing to the contents of the spray/mixing tank before destroying the container in the prescribed manner.

Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

Comply with local legislation applying to waste disposal.

14. TRANSPORT INFORMATION

ADR-UN number:	2903
ADR-Class:	6.1 + 3
Proper shipping name:	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flashpoint not less than 23°C (Fenpyroximate and alkyl benzenes)
ADR-Upper number:	63
ADR-Label:	6.1 + 3
ADR-packing group:	III
Rail (RID):	6.1
Marine pollutant:	Marine pollutant
IMDG-Un number:	2903
IMDG-Class:	6.1
IMDG-Technical name:	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flashpoint not less than 23°C (Fenpyroximate and alkyl benzenes)
IMDG-Packing group:	III
IMDG-Label:	6.1 + 3 + Marine Pollutant
IMDG-EMS:	F-E, S-D

15. REGULATORY INFORMATION

Symbol:

Xn: Harmful
N: Dangerous for the environment
F: Flammable substance.



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R phrases:

R10	Flammable
R20/21	Harmful by inhalation and in contact with skin.
R22	Harmful if swallowed.
R26	Very toxic by inhalation.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R37	Irritating to respiratory system.
R38	Irritating to skin.
R43	May cause sensitization by skin contact
R51/R53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

S phrases:

S24/25	Avoid contact with skin and eyes
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S24/25	Avoid contact with skin and eyes
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37	Wear suitable gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S56	In case of accident by inhalation; remove casualty to fresh air and keep at rest.
S63	In case of accident by inhalation; remove casualty to fresh air and keep at rest.

16. OTHER INFORMATION

Packaging:

Packed in 1, 5, 10, 20 litres fluorinated plastic containers, labelled according to South African regulations and guidelines.

Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or non-standard uses of neither the product nor where instructions or recommendations are not followed.

All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

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Compiled: 2009
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