

**MATERIAL SAFETY DATA SHEET**  
Emergency contact number: +27 11 365-8639



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**1) IDENTIFICATION OF THE SUBSTANCE / PREPARATION**

Commercial name: **COOPEX AEROSOL FLY & MOSQUITO KILLER**

Company identification: Bayer (Pty.) Ltd.  
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**2) COMPOSITION / INFORMATION ON THE INGREDIENTS**

Description: Product is chemically a pyrethroid insecticidal space-spray aerosol-type, based on 15,0 g/kg active pyrethrins and 133,0 g/kg active piperonyl butoxide; the liquid contents consist of a clear, light brown, mobile liquid contained under pressure in an aerosol can. The can is fitted with a metered dose valve.

Composition:  
Pyrethrins: 15,0 g/kg Cas Reg No: 8003-34-7  
Piperonyl butoxide: 150,0 g/kg Cas Reg No: 51-03-6

Use: An insecticidal space spray aerosol for the control of flies and mosquitoes.

GCPF Code: AE

**3) HAZARD IDENTIFICATION OF THE PRODUCT**

Hazards: Aerosols, flammable, n.o.s.

Nature of Hazard: Flammable gas under pressure.  
Violent rupture of containers involved in a fire, possible.  
Slightly hazardous if inhaled and/or swallowed due to contamination of food.  
Contact with the liquid/spray mist may cause irritation to eyes and skin.  
Allergic respiratory symptoms may develop after several hours.  
The product is toxic to fish, bees and other useful insects and wildlife.  
Decomposes in a fire to emit acrid smoke and irritating fumes.

NOTE: For normal handling and use of the product, please consult the label on the packaging.

**4) FIRST AID MEASURES**

Inhalation: Remove patient from source of poisoning to well ventilated area and keep him quiet and reassured. If not breathing administer artificial respiration (to be administered by trained personnel), if breathing is difficult give oxygen. DO NOT apply direct mouth to mouth respiration, use a disposable protective mouthpiece.

Skin Contact: Remove contaminated clothing, rinse the affected skin area with plenty of soap and cool water or shower, continue to wash for 10 minutes. Obtain medical attention if excessively exposed. Wash contaminated clothing before re-use.

Eye Contact: Immediately wash eyes with copious amounts of clean water for at least 15 minutes, cover with a sterile dressing, get medical attention if irritation persists.

Ingestion: Keep patient calm and reassured, rinse mouth with water. DO NOT induce vomiting. Never give anything by mouth to an unconscious person. DO NOT apply direct mouth to mouth respiration, use a disposable protective mouthpiece.

SEEK MEDICAL ADVICE PROMPTLY AND SHOW THIS MSDSTO A MEDICAL PRACTITIONER

NOTE TO PHYSICIAN: No specific antidote known. Symptomatic and supportive treatment as indicated. The formulation contains a synergist which may make a person temporarily vulnerable to a variety of toxic insults which would normally be tolerated with ease.



<b>5) FIRE FIGHTING MEASURES</b>	
Fire hazards:	Flammable gas under pressure. Flash point of propellant: About 60 °C (Closed Cup)
Explosion hazards:	Violent rupture of containers involved in a fire, possible. Vapours of propellant are heavier than air, may travel along the ground and be ignited at remote locations and flash back. The propellant is explosive: Explosive limits: 1,9 to 8,5 % in air. Auto-ignition temperature of propellant: 405 °C
Decomposition products in a fire	Decomposes in a fire to emit acrid smoke and irritating fumes; the propellant decomposes in a fire to emit carbon monoxide and carbon dioxide.
Fire extinguisher agents to be used:	Dry powder, CO <sub>2</sub> .
Protection for fire fighters:	Chemical impermeable gloves, face shield, effective respiratory protection or self contained breathing apparatus as dictated by circumstances, full length protective clothing, apron and boots.
Fire:	Self-contained breathing apparatus as irritating fumes may be given off.
Specific methods:	Water fog to be used to keep undamaged containers cool in a fire. Eye contact with the liquid propellant may cause frostbite and severe corneal damage. High airborne concentrations of propellant may cause irritation to eyes and skin. Skin contact with the liquid propellant may cause frostbite and irritation. The propellant reacts vigorously with oxidizing agents. No unprotected person should be allowed in the vicinity. Evacuation of area may be necessary in a fire. Water spray may be used to disperse accumulating vapour of punctured cans. Contain liquid run-off with temporary earth barriers. The material is toxic to fish, bees and other useful insects.
<b>6) ACCIDENTAL RELEASE MEASURES</b>	
Personal precautions:	Wear suitable protective clothing. Eliminate all ignition sources. Report incident to emergency personnel if aerosol cans are damaged.
	Environmental precautions: Prevent contamination of vegetation, sewers, waterways or low areas, drinking water and/or crops and grazing.
Methods for cleaning up:	Extinguish all flames. Dike spill. Absorb liquid with sand or other non-flammable absorbent material. Shovel up carefully and dispose of as for flammable and toxic waste in accordance with local/national regulations.
Prevention of secondary hazards:	No smoking or naked flames. Inspect for damaged aerosol cans.
PROTECTIVE CLOTHING:	Chemical impermeable gloves, face shield, effective respiratory protection or self-contained breathing apparatus as dictated by circumstances, full length protective clothing, apron and boots.
<b>7) HANDLING AND STORAGE</b>	
Technical measures:	Ensure adequate ventilation. Eliminate any source of ignition.
Prevention of worker exposure:	Use only as per directions on label. Wash hands and face with soap and water after use. Avoid excessive inhalation and skin contact.
Environmental precautions:	During application and when cleaning protective clothing, contamination of all sources of drinking water, rivers, dams, crops or grazing shall be prevented.
Hazards:	Violent eruption of aerosol can if exposed to temperatures above 50 °C. Prevent damage to aerosol can, do not puncture. The product is toxic to fish, bees and other useful insects.
Cleaning of equipment after use:	All protective clothing and respirators used shall be decontaminated, washed, rinsed and dried.
Storage: Suitable storage conditions:	Store under lock and key and out of reach of children and domestic animals. Store in a cool, dry place away from sources of heat and naked flames.
Precautions:	Store away from foodstuffs, eating utensils and drinking water. Do not expose aerosol container to temperatures exceeding 50 °C.
Packaging Materials:	Recommended packaging: Aerosol can with metered dose valve. For liquid spillage: Metal drum. Unsuitable packaging: Plastic containers.



<b>8) EXPOSURE CONTROLS AND PERSONAL PROTECTION</b>	
Exposure Controls – Engineering:	Effective ventilation to be maintained at all times. Do not expose aerosol container to temperatures above 50 °C .
<b>PERSONAL PROTECTION:</b>	
Application:	Adequate ventilation. Wash exposed skin area, face and hands after use.
Manufacture of concentrate:	Chemical impermeable gloves, barrier cream on exposed skin, goggles if necessary, respiratory protection, full length overalls and boots.
<b>EMERGENCY:</b>	Chemical impermeable gloves, face shield, effective respiratory protection or self-contained breathing apparatus as dictated by circumstances, full length protective clothing and boots.
Specific hygiene measures:	Avoid skin contact and inhalation of spray mist. Wash face and hands after use and before eating or smoking.
<b>9) PHYSICAL AND CHEMICAL PROPERTIES</b>	
Description:	A clear, light brown concentrate liquid contained under pressure in an aerosol can.
Flash point for solvent:	65 to 70 °C (Closed Cup)
Flash point for propellant:	About 60 °C (Closed Cup)
Solubility:	Pyrethrins are relatively insoluble in water; miscible with most organic solvents.
<b>10) STABILITY AND REACTIVITY</b>	
Stability:	The product is stable in original container in normal temperatures and conditions.
Compatibility:	The pyrethroid is incompatible with alkaline substances; hydrolysis and loss of insecticidal activity.
Decomposition:	For pyrethrins in light and air, oxidation and loss of insecticidal activity occurs.
Fire:	Decomposes in a fire to emit acrid smoke and irritating fumes.
<b>11) TOXICOLOGICAL INFORMATION</b>	
Acute toxicity: The product may be hazardous on inhalation, skin contact and ingestion. (Pyrethrins)	
LD <sub>50</sub> acute oral, rats:	584 to 900 mg/kg
LD <sub>50</sub> acute percutaneous, rats:	> 1 500 mg/kg
LD <sub>50</sub> acute percutaneous, rabbits:	> 5 000 mg/kg
Pyrethrins may cause dermatitis in sensitized individuals. Persons sensitive to pollen are prone to allergic reactions which include respiratory discomfort.	
(Piperonyl butoxide)	
LD <sub>50</sub> acute oral, rats:	7 950 mg/kg
LD <sub>50</sub> acute percutaneous, rabbits:	1 880 mg/kg
Eye contact:	Contact with the liquid or spray mist may be irritating, causing redness, pain and blurred vision; excessive contact with the propellant may cause frostbite and corneal damage. High airborne concentrations of propellant may cause irritation.
Skin contact:	Avoid skin contact with spray mist or liquid contents; may be irritating causing redness, discomfort; pyrethroid toxin cause allergic reaction in sensitive persons which may include dermatitis, asthma and vasomotor rhinitis. Excessive contact with propellant may cause redness and blistering.
Inhalation:	
LC <sub>50</sub> (rats) pyrethrins:	3.4 mg/l (4 h)
LC <sub>50</sub> (rats) piperonyl butoxide:	> 5.9 mg/l
The propellant is an asphyxiant and high concentration may cause drowsiness and loss of consciousness; avoid excessive inhalation of spray mist. The pyrethroid toxin may cause numbness of the lips and tongue, sneezing. Persons sensitive to pollen are prone to allergic reactions to pyrethroids which may include respiratory discomfort, asthma and vasomotor rhinitis; may be delayed for several hours. The formulated product contains a synergist which may make a person temporarily vulnerable to a variety of toxic insults which would normally be tolerated with ease.	
Ingestion and overexposure: The pyrethroid toxin is a central nervous system stimulant and may cause convulsions. The liquid concentrate contains a solvent; DO NOT induce vomiting. Ingestion of content due to contamination of food may cause numbness of the lips and tongue, sneezing and/or nausea; persons sensitive to pollen are prone to allergic reactions to pyrethroids which may be delayed for several hours.	

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Effects due to repeated and/or prolonged exposure:  
Pyrethroids are very toxic to insects but relatively non-toxic to mammals over extended periods in small quantities. For pyrethroids the rapid metabolic detoxication in mammals results in a low parenteral toxicity. Sensitization to pyrethroid substances, possible. Excessive or prolonged skin contact and inhalation of pyrethroids may cause severe dermatitis, asthma and vasomotor rhinitis in sensitized individuals. Individuals prone to asthma and severe sinusitis attacks should avoid prolonged exposure to pyrethroids.

Delayed effects:  
Persons sensitive to pollen are prone to allergic reactions to pyrethroids which may be delayed for several hours.  
Sensitization to pyrethroid substances due to repeated or prolonged exposure, possible.

Chronic studies:  
Pyrethrins:  
The Acceptable Daily Intake (ADI) for man is 0,04 mg/kg body weight.  
Pyrethroids are very toxic to insects but relatively non-toxic to mammals over extended periods in small quantities (see ADI).  
Piperonyl butoxide:  
In 2-year feeding trials, rats receiving 100 mg/kg diet suffered no ill-effects.  
The ADI for man is 0,03 mg/kg body weight.

**12) ECOLOGICAL INFORMATION**

Toxicity to fish: For pyrethrins the LC<sub>50</sub> (96 hours) (static tests) for coho salmon is 39 mg/l and for channel catfish is 114 mg/l.  
For piperonyl butoxide, technical the LC<sub>50</sub> (24 hours) for carp is 5,3 mg/l.

Toxicity to bees: For honeybees the oral LD<sub>50</sub> is 150 ng/bee and for contact is 130 to 290 ng/bee. Pyrethrins exhibit a repellent effect to bees.

Toxicity to birds: For piperonyl butoxide, technical the acute oral LD<sub>50</sub> for starling is more than 100 mg/kg.

Persistence/Degradation: For pyrethrins in the environment, degradation, promoted by sunlight and UV light, begins at the alcohol group and involves the formation of numerous unknown cleavage products.

Bioaccumulation: Pyrethrins are oxidized in sunlight and rapidly hydrolysed by alkali with loss of insecticidal activity.

**13) DISPOSAL CONSIDERATIONS**

Accidental spillage: If aerosol cans have been punctured, extinguish all source of ignition. Consider evacuation of bystanders. Contain liquid spillage with sand or earth, disperse vapour cloud with water spray. Cover drains, sewers, etc. and inform authorities if major spillage occurs. Sweep up and dispose of contained spillage after all danger of fire has been eliminated and dispose of as for flammable and toxic waste in accordance with local/national regulations.

Protective clothing to be worn when clearing spillage.

Waste from residues: Liquid residue to be disposed of as for flammable and toxic waste in accordance with local/national regulations.

Disposal of used packaging material: Dispose of empty containers as flammable and toxic waste in accordance with local/national regulations. DO NOT burn. DO NOT puncture containers.

**14) TRANSPORT INFORMATION**

Un no.: 1950

Class: 2.1

IMDG: 2013

Ems: 2-13

MFAG: 620

Susidiary risk: •

Packaging group: III

Declaration for land shipment: 1950 AEROSOLS, flammable

Declaration for sea shipment: 1950 AEROSOLS, flammable

Declaration for shipment by air: 1950 AEROSOLS, flammable

**15) REGULATORY INFORMATION**

Risk phrases: R 10, 20.

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Safety phrases: S 2, 16.

WHO Classification: III (slightly hazardous)

**16) OTHER INFORMATION**

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

Consult the label for the instructions for use.

THIS INFORMATION CONCERNS ONLY THE PRODUCT AS CONFORMING TO ITS SPECIFICATIONS AND LIMITED TO THE USES HEREIN STATED.

This sheet complements the technical sheet of use but does not replace it. The information contained on this sheet is based on knowledge of the product on the date of publication. It is given in good faith.

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