

# Selefos

## SAFETY DATA SHEET

### 1. PRODUCT & COMPANY IDENTIFICATION

**Product Name:** Selefos  
**Pesticide Classification:** Insecticide  
**UN No.:** 3017

#### Supplier

Enviro Bio-Chem (Pty) Ltd  
Co. Reg. No.: 2013/194774/07  
44 Kerk Street, Lichtenburg  
North West, South Africa 2740

#### Registration Holder

Erintrade t/a RT Chemicals  
Co. Reg. No.: CK2001/036403/23  
44 Kerk Street, Lichtenburg  
North West, South Africa 2740

**Telephone:** +27 87 231 7261  
**Fax:** 086 541 7948  
**Website:** [www.envirobiochem.co.za](http://www.envirobiochem.co.za)

**24 Hr Emergency Number:** Bateleur: +27 83 123 3911

#### **In case of Poisoning:**

Poison Information Centre: +27 82 446 8946  
Tygerberg Hospital: (+27 21) 931 6129  
Poison Emergency Enquiries: (+27 21) 689 5227

**Common Name:** Profenofos 500 g/l EC  
**Chemical Name:** O-4-bromo-2-chlorophenyl O-ethyl S-propyl phosphorothioate (IUPAC).  
**Empirical Formula:** C<sub>11</sub>H<sub>15</sub>BrClO<sub>3</sub>PS  
**CAS No.:** 41198-08-7  
**RSA Reg. No.:** L6950 Act 36 of 1947  
**Namibia Reg. No.:** N-AR 1456

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### 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Ingredient Name</u>	<u>Concentration</u>
Profenofos	± 500 g/l
Inert Ingredients	± 500 g/l

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### 3. HAZARD IDENTIFICATION

**Hazard Class:** WHO Class II -Moderately hazardous.

**Main Hazard:** The active ingredient, profenofos, can be rapidly absorbed through the skin. Poisoning may occur due to cholinesterase inhibition.

**Flammability:** Flammable

**Chemical Hazard:** During a fire this product may release smoke and hazardous decomposition products.

**Biological Hazard:** This product is very toxic for the environment, especially for aquatic organisms.

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### 4. FIRST AID MEASURES AND PRECAUTIONS

If poisoning is suspected, do not wait for symptoms to develop. Contact a physician, the nearest hospital or the nearest Poison Control Centre.

**Symptoms of Human Poisoning:** The symptoms are typical of organophosphate pesticides and can include nausea, diarrhoea, dripping nose and mouth, excessive salivation, stomach cramps, excessive sweating, trembling, loss of muscle co-ordination, muscular twitches, weakness, mental confusion, blurred vision, breathing difficulties, rapid pulse and pin-point pupils.

#### First Aid Measures:

**Skin Contact:** If skin contact occurs, remove contaminated clothing and wash affected areas thoroughly with soap and water. If poisoning occurs give atropine tablets as indicated. Wash contaminated clothing before re-use.

**Eye Contact:** Immediately flush eyes with gently flowing cold water for 10 to 20 minutes, holding the eyelids open. Seek medical attention if necessary. If poisoning occurs give atropine tablets as indicated.

**Ingestion:** Obtain immediate medical advice. If swallowed, do not induce vomiting. Give a glass of water. If swallowed give one atropine tablet every 5 minutes until dryness of the mouth occurs.

**Inhalation:** Obtain immediate medical advice. Move affected person to fresh air and keep at rest until recovered. If poisoning occurs give atropine tablets as indicated.

**Advice to Physician:** Treat as a cholinesterase inhibitor.

**Antidote:** Atropine sulphate is antidotal.

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### 5. FIRE FIGHTING MEASURES

**Flammability:** Flammable

**Extinguishing Agents:** Use dry chemical, foam, fine-spray or fog.

**Firefighting:** Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

**Special Hazards:** During a fire this product may release smoke and hazardous decomposition products.

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### 6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

**Personal Precautions:** Wear protective clothing. Avoid breathing vapours or spray drift. If necessary, wear a self-contained breathing apparatus.

**Environmental Precautions:** Prevent spilled material from entering drains or watercourses. Contain spill and absorb with earth, sand, clay or another absorbent material.

**Spills:** Keep all bystanders away. Wear goggles, half face-piece respirator with combined dust and vapor cartridge, full length clothing and PVC gloves. Reposition any leaking containers so as to minimize further leakage. Dam and absorb spill with an absorbent material (e.g. sand or soil). Shovel the absorbed spill into drums. Dispose of the absorbed material will depend upon the extent of the spill. Contain in a secure location until disposal method is established. Decontaminate the spill area with hydrated lime scattered over the spill prior to rinsing off with water. Dispose of waste according to Section 13 of this document.

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## 7. HANDLING AND STORAGE REQUIREMENTS

**Handling:** Avoid contact with eyes and skin. Avoid inhalation of fumes. 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 products get inside.

**Storage:** Avoid humidity and sunshine. Store in its original container in isolated, dry, cool and well-ventilated area. Store away from incompatible substances. Keep under lock and key out of reach of unauthorized persons, children and animals. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

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## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

**Acceptable Daily Intake (ADI):** 0.01 mg/kg body weight.

**Engineering Controls:** Use outdoors in a well-ventilated area. Comply with occupational safety, environmental, fire and other applicable regulations. Wear suitable personal protective equipment.

### Personal Protective Equipment:

**Clothing:** Long-sleeved shirt, long pants, shoes plus socks, protective waterproof (impermeable) gloves. Employee must wear appropriate protective clothing and equipment to prevent prolonged skin contact with this product. Clothing soaked with product solution should be promptly removed and laundered before re-use.

**Gloves:** Protective waterproof (impermeable) rubber or plastic gloves are recommended.

**Eye Protection:** Wear eye protection. During mixing or pouring operations or other activities in which eye contact with undiluted product is likely to occur, splash goggles should be worn. 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.

**Respiratory:** Respiratory protection is not required for normal use and handling. During periods of abnormal exposure to heavy spray or mist, use a NIOSH approved dust/mist respirator. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

**Other Protection:** Do not eat, drink or smoke while handling this product. Prevent contamination of food, feeds, drinking water and eating utensils. After using this product wash hands and face before eating. Take extreme care to avoid drift. Wash accurately (preferably a shower) after a work shift. Wash hands with soap and water during breaks and at the end of work.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Light yellow liquid.

**pH:** 3-7

**Corrosiveness:** Non-corrosive

**Storage Stability:** It is stable under the neutral and slightly conditions, unstable under alkaline conditions. Readily miscible with organic solvents.

**Solubility in Water:** 0.02 g/l (at 20 °C).

**Solubility in Organic Solvents:** Soluble in many organic solvents.

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## 10. STABILITY AND REACTIVITY

**Stability:** Stable for up to 2 years under normal warehouse and field conditions. Stable under the acid conditions, unstable under alkaline conditions.

**Conditions to Avoid:** No data available.

**Incompatible Materials:** Incompatible with alkaline solutions.

**Decomposition Products:** No data available.

## 11. TOXICOLOGICAL INFORMATION

**Acute Oral LD<sub>50</sub> (rat):** 501 mg/kg

**Acute Dermal LD<sub>50</sub> (rabbit):** >2 000 mg/kg

**Acute Inhalation LC<sub>50</sub> (rat, 4 hr):** >0.005 mg/l air.

**Skin and Eye Irritation (rabbit):** Moderately irritating to skin and eyes. The active ingredient, profenofos, can be rapidly absorbed through the skin. Poisoning may occur due to cholinesterase inhibition.

**Skin Sensitization (guinea pig):** Weak skin sensitization to guinea pigs.

**Chronic Dietary Study:** Repeated minor exposure may cause a cumulative poisoning effect due to cholinesterase inhibition. Cholinesterase levels will return to normal a few weeks after exposure is stopped. The hydrocarbon liquid may cause narcosis and central nervous system depression following prolonged over-exposure. The overall NOEL, based on a 2 year rat dietary study is 0.3 mg/kg/day.

**Carcinogenicity:** Not carcinogenic.

**Mutagenicity:** Profenofos technical has been extensively tested and no evidence of mutagenic, teratogenic or reproductive effects was obtained.

**Reproductive Hazard:** Profenofos technical has been extensively tested and no evidence of mutagenic, teratogenic or reproductive effects was obtained.

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## 12. ECOLOGICAL INFORMATION

Ecotoxicity is based on the active ingredient toxicity.

**Aquatic Toxicity Fish LC<sub>50</sub> (96 hr):** 0.2 mg/l (rainbow trout); 0.7 mg/l (bluegill sunfish). Very toxic to fish.

**Aquatic Toxicity Daphnia EC<sub>50</sub> (48 hr):** Very toxic to crustaceans, algae and daphnia.

**Aquatic Toxicity Algae EC<sub>50</sub> (5 days):** Very toxic to crustaceans, algae and daphnia.

**Avian Toxicity LD<sub>50</sub> (2 days):** 300 ppm (mallard duck). Very toxic to birds.

**Bee Toxicity LD<sub>50</sub>:** Very toxic to bees.

**Biodegradability:** No data available.

**Bio-accumulation:** Profenofos has high bioaccumulation potential.

**Mobility:** Profenofos is of low mobility in soil.

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## 13. DISPOSAL CONSIDERATION

**Pesticide Disposal:** Dispose of waste product as hazardous waste via a licensed disposal contractor to an approved landfill. Do not discharge into drains or sewers. Do not contaminate crops, grazing, rivers or dams with chemical or used containers. Waste resulting from the use of this product that cannot be re-used or reprocessed should be disposed of in a landfill approved for pesticide disposal in accordance with applicable local procedures. Comply with any local legislation applying to waste disposal.

**Package Product Wastes:** Triple rinsing or preferably pressure rinsing containers. Add the rinsings to the spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler for designated collection point. If not recycling, break, crush or puncture and dispose of via a licensed disposal contractor to an approved landfill. If no landfill is available, bury the containers below 50 cm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

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## 14. TRANSPORT INFORMATION

**UN No.:** 3017

**Class:** 6.1

**Packaging Group:** III

**Proper Shipping Name:** Organophosphorus Pesticide; Liquid; Toxic; Flammable (contains Profenofos).

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## 15. REGULATORY INFORMATION

**Risk Phrases:**

- R10-** Flammable
- R20/21/22-** Harmful by inhalation, in contact with skin and if swallowed.
- R36/38-** Irritating to eyes and skin.
- R43-** May cause sensitization by skin contact.
- R50-** Very toxic to aquatic organisms.
- R57-** Toxic to bees.

**Safety Phrases:** **S1/2-** Keep locked up and out of the reach of children.

**National Legislation:** This product is registered under Act 36 of 1947 of the Republic of South Africa. It is a violation of South African law to use this product in any manner inconsistent with its approved labelling. Read and follow all label directions.

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## 16. OTHER INFORMATION

**Note:** Read and understand all the information on the product label before using the product.

**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 and use of the product. It is not applicable to unusual or non-standard uses of 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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