



Excel Crop Care Limited
Beyond crop protection. Behind every farmer

Excel Crop Care Limited, India

Material Safety Data Sheet Profenofos Technical

1. Chemical Product and Company Identification

Product Name : Profenofos Technical
Formula : $C_{11}H_{15}BrClO_3PS$
Molecular Weight : 373.6
Chemical Name : O-(4-bromo-2-chlorophenyl) O-ethyl S-propylphosphorothioate
Manufacturer : Excel Crop Care Limited
184 / 87, S. V. Road, Jogeshwari (West),
Mumbai, (India). Pin code: 400 102
Contact no: +912266464200

Emergency Contact Details : +91 22 42522201
: +91 22 42522202
: +91 278 2212320

2. Composition/Information on Ingredients

Component	CAS No.	% W/W content
Profenofos	41198-08-7	89 minimum

3. Hazard Identification

Emergency Overview

Appearance and odour : Pale yellow liquid, garlic like odour

Warning Statements : Keep out of reach of children

Potential Health Effects

Likely Routes of Exposure : Skin contact, Inhalation, Ingestion

Eye Contact : Not irritating to the eyes

Skin contact : Not irritating to skin

Ingestion : If swallowed, this substance is considered to be toxic

Inhalation : Repeated exposure may cause organophosphate type cholinesterase inhibition.



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Environmental Hazards : The product is an organophosphate insecticide.

4. First aid measures and Antidote

Emergency and First Aid Procedure –

- If in Eyes** : Immediately flush with plenty of clean water for 15-20 minutes. Remove contact lenses if present after 5 minutes of washing. Get medical attention
- If on Skin** : Take off contaminated clothing, rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or a doctor
- If Inhaled** : Remove person to fresh air, if required give artificial respiration. Call doctor or poison control centre
- If Swallowed** : Induce vomiting (ONLY for CONSCIOUS PERSON). Unconscious person must be referred to Physician / hospital for immediate medical attention.
- Note to Physician** : Diagnosis can be confirmed estimating cholinesterase activity of blood plasma.
- Antidote** : Administer Atropine Sulfate intravenously in dose of 2-4 mg for an Adult. Administer 2 PAM 1000-2000 mg IM or IV for adult or 15 mg/Kg body weight for children.

5. Fire Fighting Measures

- Hazardous product of Combustion** : On decomposition it may give hydrogen Chloride, hydrogen Bromine, ethyl sulphide, diethyl sulphide and nitrogen oxides
- Extinguishing Media** : Foam, Dry chemical powder, CO₂ type fire extinguisher or Flood with water.
- Unusual Fire and Explosion Hazards** : Emits toxic fumes of decomposition products during combustion.
- Fire Fighting Equipment** : Evacuate area and fight fire from a safe distance. Approach from upwind to avoid hazardous vapours and decomposition products. Use self-contained breathing apparatus. Used equipments should be thoroughly decontaminated.



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6. Accidental Release Measure

Personal Protection : Observe all protection and safety precautions. Depending on the magnitude of the spill, use of eye protection, gloves and boots when cleaning up spills are recommended. For PPE see Section 8

Steps to be taken in case of a spill : It is recommended to have a predetermined plan / SOP for the handling of spills.

Stop the source of the spill immediately, if safe to do so. Contain the spill to prevent any further contamination of soil or water.

Keep all bystanders away. Wear full-length clothing and PVC gloves. Shovel and collect the spilled material / contaminated absorbent and place in suitable containers. Thoroughly scrub the floor or other impervious surfaces with a strong industrial detergent and rinse with water.

Spills in water should be contained as much as possible by isolation of the contaminated water. The contaminated water must be collected and removed for treatment or disposal through incineration.

7. Handling and Storage

Precautions in Handling : In an industrial environment, such as while making formulation, filling or packing, it is recommended to avoid physical contact with the product and to have adequate ventilation.

Avoid spillage into the eyes, or contact with bare skin or clothing. Avoid inhaling vapours, mist. Wash hands, feet, face thoroughly after handling. Remove contaminated clothing immediately

Precautions in Storage : The product is stable under normal conditions of warehouse storage. Keep container lids tightly closed. Store below 45 °C.

Store in a cool, dry, well-ventilated place away from foodstuffs, animal feed under lock & key.

Specific Use : The product is meant / approved to be used as insecticide.



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8. Exposure Controls/Personal Protection

- Exposure Limit Values** : Not known
- Personal Protection** : When used in a closed / automated system, personal protection equipment may not be required. When closed system is not possible in case of maintenance, repair, sampling etc, systems must be made nonhazardous before opening
- Respiratory Protection** : The product is likely to pose inhalation exposure concern during normal handling. In the event of an accidental discharge of the material during manufacture or handling which produces a vapours or mist, workers should put on respiratory protection equipment with a universal filter
- Protective Gloves** : Wear appropriate gloves
- Eye Protection** : Wear goggles, face shield or safety glasses. It is recommended to have an eye wash fountain available in the work area.
- Skin Protection** : Wear appropriate protective clothing to prevent direct skin contact

9. Physical and Chemical Properties

- Physical State** : Liquid
- Appearance** : Pale yellow liquid
- Odour** : Garlic like odour
- Relative Density (Specific Gravity)** : 1.4577
- pH value** : 3.6
- Viscosity** : 27.20 mm² / sec at 20^oC
- Vapour Pressure** : 2.3 x 10⁻²Pa at 25^oC
- Vapour Density** : Not known
- Melting Point / Freezing Point** : Not applicable
- Boiling Point** : 312 ± 1^o C
- Flash Point** : 135 ± 2 °C
- Auto Ignition Temp** : 264 ± 5 °C
- Flammable Limits** : Not known.



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Solubility in Water : 19.4 mg/L at 20 °C

10. Stability and Reactivity

Chemical Stability : Product is stable under ambient conditions of storage

Materials to Avoid : Avoid contact with alkali metals.

Hazardous Decomposition Product : Refer to section no. 5

Hazardous Polymerisation : Not known

11. Toxicological Information

Health Hazards : Refer to section no. 3

Acute Toxicity : The product is practically toxic. It should be treated with the usual care of handling hazardous chemicals.

Route(s) of Entry

Ingestion : LD₅₀, oral, rat: Cut off value 500 mg/kg body weight
Skin : LD₅₀, dermal, rat: > 2000 mg/kg body weight
Inhalation : 4 hour LC₅₀, rat: is5.12mg/L air

12. Ecological Information

Acute Oral Toxicity in Birds : In bobwhite quail 70-200 mg/kg body weight

Acute Toxicity in Fish (96 hrs LC₅₀) : Rainbow trout: 0.08 mg/L

Acute Toxicity Honey bees : contact LC₅₀ 48 Hrs. 0.102 µg/bee



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13. Disposal Considerations

Waste Treatment Methods : Keep out of drains, sewers, ditches and waterways. Left-over material that should not be used or chemically reprocessed and should be disposed of in a landfill approved for pesticide disposal. Other possible methods of disposal are controlled incineration with flue gas scrubbing

Containers : Emptied containers may retain vapour and product residue. Observe all labeled safeguards until container is cleaned or destroyed.

Triple or pressure rinse empty containers. Pour rinse water into formulation tank. Store for collection by approved waste disposal service.

Dispose of as non hazardous industrial waste. Do not re-use containers.

Disposal of waste and packaging materials must always be in accordance with all applicable local laws / regulations.

14. Transport Information

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Hazardous under the applicable DOT, ICAO/IATA, IMO, TDG and Mexican regulations.

UN Classification – classified as hazardous material for transport.

DOT (Department Of Transportation)

DOT Proper Shipping Name : Organo phosphorous pesticide, liquid, n. o. s. (Profenofos)

DOT Hazard class / I D No. : 6

DOT Label : Class-6.1

HAZCHEM No : 4 W

UN No. : 3018

Packing group : III



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15. Regulatory Information

Contains	: Profenofos Technical (CAS No. 41178-08-7)
Product Classification	
Acute	: Yes
Chronic	: Yes
Fire	: No
Reactivity	: No
Pressure Generating	: No
NFPA Codes	
Health	: 1
Flammability	: 0
Reactivity	: 0
Regulatory Status	: The product is meant for the production of insecticide formulations which may only be used for the applications they are registered for, in accordance with an officially approved label

16. Other Information

This MSDS is intended for worker and transport safety. It summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

This material should be handled by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.

This MSDS is not intended for product users who should refer to the product label for safety precautions applicable to them.

The information provided in this safety data sheet is believed to be accurate and reliable, but uses of the product may vary and situations unforeseen by Excel Crop Care Limited may exist. The user has to check the validity of the information under local circumstances.