

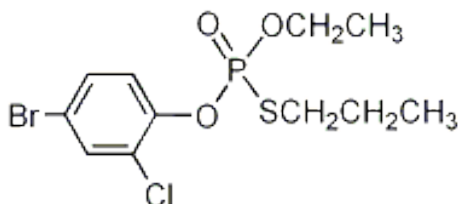
## TECHNICAL DATA SHEET PROFENOFOS TECHNICAL

### 1 INTRODUCTION

Profenofos is an organophosphate insecticides with contact and stomach action.

### 2 ACTIVE INGREDIENTS

Common name	:	Profenofos
Chemical Name	:	O-4-bromo-2-chlorophenyl O-ethyl S-propyl Phosphorothioate
Chemical Group	:	organophosphate insecticides
CAS Registry No.	:	41198-08-7
Molecular Formula	:	C <sub>11</sub> H <sub>15</sub> BrClO <sub>3</sub> PS
Structural Formula	:	



Molecular weight	:	373.6
Technical Purity	:	93% Min

### 3 PHYSICOCHEMICAL PROPERTIES

Appearance	:	Pale yellow liquid, with a garlic-like odour.
Boiling Point	:	100 °C/1.80 Pa
Kow	:	logP = 4.44
S.g./density	:	1.455 (20 °C)
Vapor Pressure	:	1.24 × 10 <sup>-1</sup> mPa (25 °C)
Solubility In water	:	28 mg/l (25 °C).
Solubility in solvents:	:	Readily miscible with most organic solvents.
Stability	:	Relatively stable under neutral and slightly acidic conditions. Unstable under alkaline conditions; on hydrolysis, DT50 (20°C) (calc.) 93 d (pH 5), 14.6 d (pH 7), 5.7 h (pH 9).

#### 4 MODE OF ACTION

Non-systemic insecticide and acaricide with contact and stomach action. Exhibits a translaminar effect. Has ovicidal properties.

#### 5. TOXICITY

<b>Acute oral</b>	:	LD50 for rats 358, rabbits 700 mg/kg.
<b>Skin and eye</b>	:	LD50 for rats c. 3300, rabbits 472 mg/kg. Non-irritant to the skin and eyes of rabbits.
<b>Inhalation</b>	:	LC50 (4 h) for rats c. 3 mg/l air.
<b>NOEL</b>	:	(6 mo) for dogs 0.005 mg/kg b.w (2 y) for rats 0.3 mg a.i./kg diet; (life-time study) for mice 1.0 mg/kg diet
<b>Toxicity class</b>	:	WHO (a.i.) II <b>EC hazard</b> Xn; R20/21/22  N; R50, R53

#### 6. ECOTOXICITY

<b>Birds</b>	:	LC50 (8 d) for bobwhite quail 70–200, Japanese quail >1000, mallard ducks 150–612 ppm.
<b>Fish</b>	:	LC50 (96 h) for rainbow trout 0.08, crucian carp 0.09, bluegill sunfish 0.3 mg/l.
<b>Daphnia</b>	:	EC50 (48 h) 1.06 µg/l.
<b>Algae</b>	:	EC50 (72 h) for <i>Scenedesmus subspicatus</i> 1.16 mg/l.
<b>Other aquatic spp.</b>	:	Highly toxic to crustaceans; LC50 for <i>Callinectes sapidus</i> 33 µg/l.
<b>Bees</b>	:	LD50 (contact, 48 h) 0.102 µg/bee.
<b>Worms</b>	:	LC50 (14 d) 372 mg/kg.

## 7 HANDLING & STORAGE

KEEP OUT OF REACH OF CHILDREN. Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. 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 this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.