



# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Buprofezin Technical  
CAS No : 953030-84-7  
Use : Insecticide  
Company Info : M/s HPM Chemicals & Fertilizers Ltd  
209-210, Anupam Bhawan, Commercial Complex  
Azadpur, Delhi-110033  
Telephone : (011)-45071800, 899  
Fax : (011)- 27681800  
Website : [www.hpmindia.com](http://www.hpmindia.com)  
E-mail : [info@hpmindia.com](mailto:info@hpmindia.com)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition	Concentration
Buprofezin a.i.	98.00% min.
Other associates impurities	02.00% max

## 3. HAZARDS IDENTIFICATION OF PREPARATION

## 4. FIRST AID MEASURES

**Skin Contact** : Remove contaminated clothing and shoes immediately. Wash contaminated area with soap or mild detergent and large amount of water until no effects of chemical remains. If symptoms persists get medical help.

**Eye Contact** : Irrigate the eyes with large amount water or normal saline occasionally lifting upper and lower lids until no evidence of chemical remains and obtain a medical help.

**Ingestion** : Remove by gastric lavage and catharsis, maintain blood pressure and airway, Give oxygen if respiration is depressed. Do not perform gastric lavage if victim is victim is unconscious. Get medical attention immediately.

**Inhalation** : Remove the patient from the exposure area to fresh air immediately. If breathing has stopped perform the artificial respiration. Keep person warm and rest. Get medical attention immediately.



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### 5. ACCIDENTIAL RELEASE

- Personal Preparation** : Avoid contact with skin, eyes and clothing.
- Environmental Precautions** : Prevent contamination of soil, drains and surface water.
- Method of cleaning** : Absorb the material in the sand, soil, diatomaceous earth or suitable absorbent. Place in suitable material and remove to safe place or dispose of in an incinerator approved for chemicals.

### 6. FIRE-FIGHTING MEASURES

- Suitable Extinguishing Media** : Dry chemical, CO<sub>2</sub>, Water spray, standard foam. For larger fire, use water spray, fog or standard foam.
- Exposure Hazards** : During a fire, irritating and possibly toxic gases like carbon dioxide; carbon monoxide; nitrogen oxides; sulfur dioxide; hydrogen chloride; may be generated by thermal decomposition or combustion
- Fire-Fighting** : Use dry chemical, foam or CO<sub>2</sub> extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate non essential 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.

### 7. HANDLING AND STORAGE

- Handling** : Use appropriate (impervious) clothing, gloves and closed foot ware to prevent the repeated contact with skin. Use flash proof and dust resistant goggles to prevent the contact with eyes.
- Storage** : Keep the product in original container tightly closed and correctly labeled. Store in suitable, cool, dry, well ventilated place under lock and key; away from the reach of the children, animals, food and animal feeding stuffs. Store away from the incompatible substances and source of ignition



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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Technical protective measures</b>	:	None
<b>Exposure controls limits</b>	:	Not Established
<b>Respiratory protection</b>	:	Wear suitable mask
<b>Hand protection</b>	:	Wear impervious gloves
<b>Eye protection</b>	:	Wear flash proof and dust resistant goggles.
<b>Skin protection</b>	:	Wear impervious clothing and closed foot ware.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling point: 225°C  
Melting point: 104.5-105.5°C  
Density: 1.18 (20°C)  
Bulk density: not applicable  
Water solubility: 0.9mg/L (20°C)  
Other solubility: 240 g/l acetone; 520 g/l chloroform; 80 g/l ethanol; 320 g/l toluene. Stable in acid and alkali. (All in g/l, 25°C).  
Stability: stable in acidic and alkaline media, stable to heat and light.  
PH value: 6.0-10.5  
Flash point: 193°C(open cup)  
Ignition temperature: Not applicable

### 10. STABILITY AND REACTIVITY

Chemical stability: Stable to light.  
Reactivity: Stable at hydrolysis at pH 5-11.  
Incompatible with other material: None known  
Hazardous reaction product: HCl, HCN, CO.

### 11. TOXICOLOGICAL INFORMATION



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Contact with the skin: not irritating to skin.

Contact with the eyes: not irritating to eye.

Inhalation: Inhalation LC50 (4 h) for rats >4.57 mg/l air.

Ingestion: no data

Acute toxicity: Oral Acute oral LD50 for male rats 2198, female rats 2355, male and female mice >10 000 mg/kg. Acute percutaneous LD50 for rats >50 00 mg/kg. Mild skin irritant (guinea pigs). NOEL for male rats 0.90, female rats 1.12 mg /kg daily. ADI (JMPR) 0.01 mg/kg.

Chronic toxicity: In a two-year study in dogs buprofezin was administered orally in gelatin capsules at doses of 0, 2, 20 or 200 mg/kg bw/day. The NOAEL was 2 mg/kg bw/day. Increased liver weight (associated with enlargement of centrilobular hepatocytes and bile duct hyperplasia) was seen at higher doses.

Reproductive effects: In reproductive effects study, the high-dose animals exhibited lower body weight gain compared to the controls; this was most pronounced in F<sub>1</sub> and F<sub>2</sub> males. Depressed weight gain was also seen at lower doses, especially in F<sub>1</sub> animals the first weeks after weaning.

Teratogenic effects: Teratogenic studies in rats at doses of buprofezin of 0, 50, 200 or 800 mg/kg bw/day and in rabbits at 0, 10, 50 or 250 mg/kg bw/day gave no indication of teratogenic potential. The NOAEL for maternal toxicity in both species was 50 mg/kg bw/day.

Mutagenic effects: Buprofezin did not have mutagenic properties when tested in a number of in vitro and in vivo systems, which included assessment of gene mutations, DNA damage, and clastogenic effects.

Carcinogenic effects: increased absolute and relative liver weight and an increased incidence of hepatocellular swelling (centrilobular and diffuse) and hepatocellular hyperplasia were seen in both sexes. It is concluded that the data does not indicate a carcinogenic potential. The noel is 20 ppm (male) equal to 1.82 mg buprofezin/kg bw/day

### **12 ECOLOGICAL INFORMATION**

Effects on birds: Buprofezin is relatively non-toxic to birds.

Effects on aquatic organisms: Fish LC50 (48 h) for carp 2.7, rainbow trout >1.4 mg/l.

Daphnia LC50 (3 h) for *D. pulex* 50.6 mg/l. Effects on other organisms: Honey bees, no direct effect at 2000 mg/l. No effect on various predators (*Euseius stipulatus* 250 mg/l; *Phytoseiulus persimilis* 500 mg/l; *Cyrtorhinus lividipennis*, *Microvelia atrolineata* 250 mg/l; *Lycosa pseudoannulata* 2000 mg/l) or parasites (*Aphytis linganensis* 125 mg/l; *Cales noacki*, *Encarsia formosa*, *Paracentrobia andoi* 250 mg/l; *Ephedrus japonicus* 1000 mg/l).

### **13. DISPOSAL CONSIDERATION**

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed on site

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(by use according to the label) or at an approved waste disposal facility. Further information can be obtained from the EPA or the equivalent state and local agencies.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Check with EPA, State, and local authorities for the current regulations applicable to your area for disposal of waste containers.

### **14. TRANSPORT INFORMATION**

**DOT CLASSIFICATION:**

Not regulated for Domestic Surface Transportation

**FREIGHT CLASSIFICATION:**

Insecticides or Fungicides, N.O.I.; other than poison

### **15. REGULATORY INFORMATION**

**EPA Registration No.** 432-1217

**US Federal Regulations**

**TSCA list**

None.

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

None.

**US States Regulatory Reporting**

**CA Prop65**

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

**US State Right-To-Know Ingredients**

None.

**Canadian Regulations**

**Canadian Domestic Substance List**

None.

### **16. OTHER INFORMATION**

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.