



# Safety Data Sheet

SDS No.:  
SDS-P/WP-B/01

Broadox

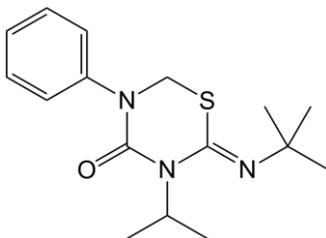
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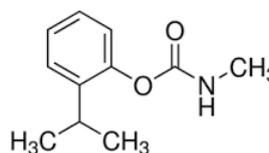
## Section 1: Identification of the Hazardous Chemical and of the Supplier

### 1.1 Product Identifier

Product Name: Buprofezin 5% + Isoprocarb 20% WP  
Trade Name: Broadox  
Active Ingredient: (EZ) -2-tert-butylimino-3-isopropyl-5-phenyl-1,3,5-thiadiazinan-4-one (Buprofezin)  
2-isopropylphenyl methylcarbamate (Isoprocarb)  
CAS No.(AI): 69327-76-0 (Buprofezin)  
2631-40-5 (Isoprocarb)  
Structural Formula:



Buprofezin



Isoprocarb

Recommended Usage: Insecticide

### 1.2 Supplier's Information

Address: Agricultural Chemicals (M) Sdn. Bhd.  
962, Lorong Perusahaan 8  
Taman Perindustrian Perai  
13600 Perai, Pulau Pinang  
Malaysia  
Tel.: +6-04-3907988  
Fax: +6-04-3905703  
Web: [www.agrichem.com.my](http://www.agrichem.com.my)  
Emergency Phone: +6-04-3907988

## Section 2: Hazard Identification

Classification: Skin irritation category 2  
Eye irritation category 2  
Specific target organ toxicity – single exposure category 3  
Acute aquatic toxicity category 1  
Chronic aquatic toxicity category 1

Pictogram:





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Signal Word: Warning

Hazard Statement:

H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
H400 Very toxic to aquatic life  
H410 Very toxic to aquatic life with long lasting effects

Precautionary Statement:

P264 Wash exposed body parts thoroughly after handling  
P280 Wear rubber gloves, protective clothing, safety goggles and face protection  
P261 Avoid breathing dust  
P271 Use only outdoors or in a well ventilated area  
P273 Avoid release to the environment  
P312 Call a POISON CENTRE or doctor/physician if you feel unwell

## Section 3: Composition and Information of the Ingredients of the Hazardous Chemical

| Component  | CAS No.    | Weight, % | Hazard Code      |
|------------|------------|-----------|------------------|
| Buprofezin | 69327-76-0 | 5%        | H412             |
| Isoprocarb | 2631-40-5  | 20%       | H302, H400, H410 |
| Surfactant | -          | < 5%      | H302, H315, H318 |
| Carrier 1  | -          | < 10%     | H319             |
| Carrier 2  | -          | < 25%     | H319             |
| Carrier 3  | -          | Balance   | H315, H335       |

## Section 4: First-aid Measures

Call a POISON CENTER or doctor/physician if you feel unwell.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin Contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion: DO NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Symptoms: No data available.



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Notes to Physician: No data available.

## Section 5: Fire-fighting Measures

Suitable Extinguishing Media: Water, carbon dioxide (CO<sub>2</sub>), chemical foam, dry chemical.

Specific Hazard During Fire: Evolves NO<sub>x</sub> and CO<sub>x</sub>.

Special Protective Equipment: Fire fighters should wear full-faced self-contained breathing apparatus and protective clothing.

## Section 6: Accidental Release Measures

Personal Precautions: Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Environmental Precautions: Avoid release to the environment.

Method for Cleaning Up: Wear protective clothing as indicated in Section 8. Evacuate non essential personnel. Collect the spill into waste container for disposal. Wash the contaminated area with a little water and detergent. Adsorb with inert material such as clay or earth. Collect into the same container for disposal. Prevent the spillage from entering local drainage system.

## Section 7: Handling and Storage

Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust. Avoid release to the environment.

Conditions for Safe Storage: Store in a well ventilated place. Keep away from heat/sparks/open flames/hot surfaces - No smoking. Keep container tightly closed.

Incompatibles: None known.

## Section 8: Exposure Control and Personal Protection

Exposure Limit:

| Source | Component  | CAS No.    | Limit              |                           |
|--------|------------|------------|--------------------|---------------------------|
| JAIH   | Buprofezin | 69327-76-0 | 2mg/m <sup>3</sup> |                           |
|        | Carrier 1  | -          | TWA                | 10mg/m <sup>3</sup>       |
| OSHA   | Carrier 1  | -          | STEL-TWA           | 6mg/m <sup>3</sup> (<1%)  |
| ACGIH  | Carrier 1  | -          | STEL-TWA           | 10mg/m <sup>3</sup> (<1%) |



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|           |           |   |                         |                            |
|-----------|-----------|---|-------------------------|----------------------------|
| NOISH     | Carrier 1 | - | STEL-TWA                | 6mg/m <sup>3</sup> (10hrs) |
| OSHA      | Carrier 2 | - | TWA total particulate   | 15mg/m <sup>3</sup>        |
| OSHA      | Carrier 2 |   | TWA respirable fraction | 5mg/m <sup>3</sup>         |
| ACGIH TLV | Carrier 2 |   | TWA respirable dust     | 2mg/m <sup>3</sup>         |
| NIOSH REL | Carrier 2 |   | TWA total particulate   | 10mg/m <sup>3</sup>        |
| NIOSH REL | Carrier 2 |   | TWA respirable fraction | 5mg/m <sup>3</sup>         |
| USA OSHA  | Carrier 3 | - | PEL TWA                 | 5mg/m <sup>3</sup>         |

Engineering Control: Local exhaust ventilation  
Individual Protection Measure: Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust.  
Personal Protective Equipment:  
Eye Protection: Protective goggles  
Skin Protection: Rubber gloves and boots  
Respiratory Protection: Dust mask or respirator

## Section 9: Physical and Chemical Properties

Appearance: Off-white powder  
Odour: Characteristic odour  
Odour Threshold: No data available  
pH: 8.5  
Melting/Freezing Point: 88 – 93°C (Isoprocarb)  
Initial Boiling Point: 104.5-105.5°C (Buprofezin)  
Boiling Range: No data available  
Flash Point: Not applicable  
Evaporation Rate: No data available  
Flammability: Not applicable  
Upper Flammability Limit: Not applicable  
Lower Flammability Limit: Not applicable  
Vapour Pressure: 4.2 x 10<sup>-5</sup> Pa at 20°C (Buprofezin)  
Vapour Density: No data available  
Relative Density: 0.5g/ml  
Solubility in Water: (Buprofezin)  
0.9 mg/l in water  
240 g/l in acetone  
520 g/l in chloroform  
Partition Coefficient P<sub>o/w</sub>: 4.8 (Buprofezin)  
Auto-ignition Temperature: No data available  
Decomposition Temperature: No data available  
Viscosity: Not applicable



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## Section 10: Stability and Reactivity

|                                  |  |
|----------------------------------|--|
| Reactivity:                      | Evolves NO <sub>x</sub> and CO <sub>x</sub> upon combustion. |
| Chemical Stability:              | The material is stable under normal storage condition.       |
| Hazardous Reaction:              | No data available.   |
| Condition to Avoid:              | Direct sunlight.   |
| Incompatible Material:           | Strong oxidizing agents.                                     |
| Hazardous Decomposition Product: | No data available.   |

## Section 11: Toxicological Information

### 11.1 Acute Toxicity

|   |                     |                       |
|---|---------------------|-----------------------|
| Component: Buprofezin                   |                     |                       |
| Ingestion, Oral LD <sub>50</sub> :      |                     |                       |
|   | Rat (female)        | 2355mg/kg             |
|   | Rat (male)          | 2198mg/kg             |
| Skin Contact, Dermal LD <sub>50</sub> : |                     |                       |
|   | Rat (male / female) | >5000mg/kg            |
| Inhalation, LC <sub>50</sub> :          |                     |                       |
|   | Rat (male / female) | > 4.57 mg/L (4 hours) |
| Component: Isoprocarb                   |                     |                       |
| Ingestion, oral LD <sub>50</sub>        |                     |                       |
|   | Rat                 | 450mg/kg              |
| Dermal, LD <sub>50</sub>                |                     |                       |
|   | Rabbit              | 10,250mg/kg           |
| Inhalation, LC <sub>50</sub>            |                     |                       |
|   | Rat, 4hr            | >500mg/m <sup>3</sup> |
| Component: Surfactant 1                 |                     |                       |
| Ingestion, Oral LD <sub>50</sub> :      |                     |                       |
|   | Rat                 | ≥1400mg/kg            |

### 11.2 Chronic Effect from Short and Long Term Exposure

|                  |                               |
|------------------|-------------------------------|
| Skin Contact:    | Causes skin irritation        |
| Eye Contact:     | Causes serious eye irritation |
| Inhalation:      | No data available             |
| Ingestion:       | No data available             |
| Carcinogenicity: | No data available             |
| Mutagenicity:    | No data available             |
| Teratogenicity:  | No data available             |



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## 11.3 Symptoms

Isoproc carb: Cholinesterase inhibitors can cause heavy salivation and secretion in the lungs, lachrymation, blurred vision, involuntary defecation, diarrhoea, tremor, ataxia, sweating, hypothermia, lowered heart rate, abd/or a fall in blood pressure as a result of their action at cholinergic nerve sites, headache, nausea, vomiting, dizziness, drowsiness, confusion, weakness, muscle cramps/spasms, change in pupil size, fever, seizures, incoordination.

## Section 12: Ecological Information

Ecotoxicity:

Component: Buprofezin

Acute Toxicity:

|   |            |
|---|------------|
| Bluegill sunfish, LC <sub>50</sub> , 96hr | > 0.33mg/L |
| Daphnia EC <sub>50</sub> , 48 hr          | > 0.42mg/L |
| Algae EbC <sub>50</sub> , 72 hr           | 49mg/L     |

Component: Isoproc carb

Acute Toxicity:

|   |           |
|---|-----------|
| <i>Cyprinus carpio</i> , LC <sub>50</sub> , 96 hr | 32mg/L    |
| Daphnia magna, EC <sub>50</sub> , 0.5hr           | 0.009mg/L |

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

Other Adverse Effect: No data available

## Section 13: Disposal Information

Dispose of contents/container to Kualiti Alam / authorized body by DOE.

## Section 14: Transportation Information

| Land (ADR/RID)       |                                 |
|----------------------|---------------------------------|
| Proper Shipping Name | Pesticide, Solid, Toxic, N.O.S. |
| Hazard Class         | 6.1                             |
| Hazchem Code         | -                               |
| UN number            | 2588                            |
| Packing Group        | III                             |
| Label / Mark         | 6                               |



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## Sea (IMDG)

|                         |                                 |
|-------------------------|---------------------------------|
| Proper Shipping Name    | Pesticide, Solid, Toxic, N.O.S. |
| Hazard Class            | 6.1                             |
| UN Number               | 2588                            |
| Packing Group           | III                             |
| Marine Pollutant        | -                               |
| Label                   | 6                               |
| Transport Document Name | -                               |

## Air (IATA)

|                         |                                 |
|-------------------------|---------------------------------|
| Proper Shipping Name    | Pesticide, Solid, Toxic, N.O.S. |
| Hazard Class            | 6.1                             |
| UN number               | 2588                            |
| Packing Group           | III                             |
| Label / Mark            | 6                               |
| Transport Document Name | -                               |

## Section 15: Regulatory Information

Classification: Skin irritation category 2  
Eye irritation category 2  
Specific target organ toxicity – single exposure category 3  
Acute aquatic toxicity category 1  
Chronic aquatic toxicity category 1

Signal Word: Warning

Pictogram:



Pesticides Act: Class III  
Classification: Harmful

## Section 16: Other Information

Date of Preparation: 6 November 2015  
Date of Revision: -  
Reference Document: ICOP on Chemicals Classification and Hazard Communication 2014  
GHS Purple Book  
MSDS

Disclaimer: To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.