



# MATERIAL SAFETY DATA SHEET (MSDS)

## Newton

### IDENTIFICATION OF THE SUPPLIER:

AGRO CHEMICALS INDUSTRIES LTD  
P.O.Box 183020 Amman 11118 Jordan  
Tel. : +962 6 5548224/5  
Fax. : +962 6 5548220  
E-mail: info@aci.com.jo

### PRODUCT IDENTIFICATION :

**Common Name:** Buprofezin  
**Trade Name:** Newton  
**Chemical Name:** (Z)-2-[(1,1-dimethylethyl)imino]tetrahydro-3-(1-methylethyl)-5-phenyl-4H-1,3,5-thiadiazin-4-one  
**Chemical Formula:** C<sub>16</sub>H<sub>23</sub>N<sub>3</sub>OS  
**Molecular Weight:** 305.4

### PRODUCT COMPOSITION:

Contents	CAS#	Amount in %w/v
Buprofezin (a.i)	69327-76-0	43.2

Inert materials: Up to 1 L



---

## SECTION 2: HAZARD(S) IDENTIFICATION

---

### GHS Classification

Acute aquatic toxicity - Category 3

Chronic aquatic toxicity - Category 1

### GHS label elements

#### Hazard pictograms



Signal word: **WARNING!**

### Hazard statements

**Very toxic to aquatic life  
with long Precautionary  
statements**

**Prevention**  
Avoid release to the environment.

### Response

Collect spillage

### Other hazards

No data available lasting effects.

---

---

---

### SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS, IN ACCORDANCE WITH SCHEDULE 8

---

This product is a mixture.

Component	CASRN	Concentration
Buprofezin	69327-76-0	40.0%
Propylene glycol	57-55-6	< 5.0 %
Balance	Not available	<= 56.0 %

---

---

### SECTION 4: FIRST AID MEASURES

---

#### Description of first aid measures

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

**Skin contact:** Take off contaminated clothing. Rinse skin immediately plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Suitable emergency safety shower facility should be available in work area.

**Eye contact:** Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.

**Ingestion:** No emergency medical treatment necessary.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

#### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

---

---

## **SECTION 5: FIREFIGHTING MEASURES**

---

**Hazchem Code:** •2X

**Suitable extinguishing media:** To extinguish combustible residues of the product use water fog, carbon dioxide, dry chemical or foam.

**Unsuitable extinguishing media:** No data available

### **Special hazards arising from the substance or mixture**

**Hazardous combustion products:** Under fire conditions some components of the product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Sulfur oxides. Nitrogen oxides. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated. Residues can burn. If exposed to fire from another source and water is evaporated, exposure to high temperatures may cause toxic fumes.

### **Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

---

---

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

---

**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitably and properly labelled containers. Large spills: Contact Corteva Agriscience for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

---

## SECTION 7: HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED

---

**Precautions for safe handling:** Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapour or mist. Wash thoroughly after handling. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

---

## SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

---

### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Propylene glycol	US WEEL	TWA	10 mg/m <sup>3</sup>
	AU OEL	TWA Total (vapour and particles)	474 mg/m <sup>3</sup> 150 ppm
	AU OEL	TWA particulate	10 mg/m <sup>3</sup>

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

### Exposure controls

**Engineering controls:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

### Skin protection

**Hand protection:** Use chemical resistant gloves classified under standard AS/NZS 2161.10: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Avoid gloves made of: Polyvinyl alcohol ("PVA"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to AS/NZS 2161.10) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to AS/NZS 2161.10) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. Foremergency conditions, use an approved positive-pressure self-contained breathing apparatus.

The following should be effective types of air-purifying respirators: Organic vapour cartridge with a particulate pre-filter.

**Other Information:** Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:  
AS/NZS 1336: Eye and face protection – Guidelines.  
AS/NZS 1337: Personal eye protection - Eye and face protectors for occupational applications.  
AS/NZS 1715: Selection, use and maintenance of respiratory protective equipment.  
AS/NZS 2161: Occupational protective gloves.  
AS/NZS 2210: Occupational protective footwear.  
AS/NZS 4501: Occupational protective clothing Set

---

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

---

### **Appearance**

<b>Physical state</b>	Liquid.
<b>Colour</b>	Off-white
<b>Odour</b>	Characteristic odour
<b>Odour Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting point/range</b>	Not applicable to liquids
<b>Freezing point</b>	No data available
<b>Boiling point (760 mmHg)</b>	100 °C <i>Literature</i>
<b>Flash point - closed cup</b>	Not applicable
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Relative Vapor Density (air = 1)</b>	No data available
<b>Relative Density (water = 1)</b>	No data available
<b>Water solubility</b>	Disperses in water <i>Literature</i>
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Kinematic Viscosity</b>	No data available
<b>Explosive properties</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Liquid Density</b>	1.09 g/cm <sup>3</sup> at °C <i>Literature</i>
<b>Molecular weight</b>	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

---

---

## **SECTION 10: STABILITY AND REACTIVITY**

---

**Reactivity:** No data available.

**Chemical stability:** Thermally stable at typical use temperatures.

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Can coagulate if frozen. Active ingredient decomposes at elevated temperatures.

**Incompatible materials:** Avoid contact with: Strong oxidizers. Addition of chemicals may cause phase separation.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Nitrogen oxides. Sulfur oxides. Toxic gases are released during decomposition.

---

---

## **SECTION 11: TOXICOLOGICAL INFORMATION**

---

*Toxicological information appears in this section when such data is available.*

### **Acute toxicity**

#### **Acute oral toxicity**

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: LD50, Rat, male and female, >5,000 mg/kg

#### **Acute dermal toxicity**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: LD50, Rabbit, male and female, > 2,000 mg/kg

#### **Acute inhalation toxicity**

Prolonged excessive exposure to mist may cause adverse effects. Mist may cause irritation of upper respiratory tract (nose and throat).

LC50, Rat, male and female, Mist, >0.93 mg/l. No deaths occurred at this concentration.

### **Skin corrosion/irritation**

Brief contact may cause slight skin irritation with local redness.

### **Serious eye damage/eye irritation**

May cause eye irritation.

May cause slight corneal injury.

May cause lacrimation (tears).

### **Sensitization**

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization: No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

For the active ingredient(s): In animals, effects have been reported on the following organs: Liver. Thyroid. Skin.

**Carcinogenicity**

For the active ingredient(s). Did not cause cancer in laboratory animals.

**Teratogenicity**

For the active ingredient(s): Has been toxic to the foetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

**Reproductive toxicity**

For the active ingredient(s). In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

**Mutagenicity**

For the active ingredient(s): In vitro genetic toxicity studies were predominantly negative. Animal genetic toxicity studies were negative.

**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

---

**SECTION 12: ECOLOGICAL INFORMATION**

---

*Ecotoxicological information appears in this section when such data is available.*

**Ecotoxicity****Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, Cyprinus carpio (Carp), 96 Hour, > 95.8 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia (water flea), 48 Hour, 71.5 mg/l

**Acute toxicity to algae/aquatic plants**

EbC50, Algae, 72 Hour, 97.7 mg/l

**Persistence and degradability****Buprofezin**

**Biodegradability:** Chemical degradation (hydrolysis) is expected in the environment.

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitizer:** OH radicals

**Atmospheric half-life:** 2.39 Hour

**Method:** Estimated.



### **Propylene glycol**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

10-day Window: Pass

**Biodegradation:** 81 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

10-day Window: Not applicable

**Biodegradation:** 96 %

**Exposure time:** 64 d

**Method:** OECD Test Guideline 306 or Equivalent

**Theoretical Oxygen Demand:** 1.68 mg/mg

**Chemical Oxygen Demand:** 1.53 mg/mg

<b>Incubation Time</b>	<b>BOD</b>
5 d	69.0 %
10 d	70.0 %
20 d	86.0 %

**Photodegradation**

**Atmospheric half-life:** 10 Hour

**Method:** Estimated.

### **Balance**

**Biodegradability:** No relevant data found.

### **Bioaccumulative potential**

#### **Bupropfen**

**Bioaccumulation:** Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

**Partition coefficient: n-octanol/water (log Pow):** 4.3 at 20 °C Measured

**Bioconcentration factor (BCF):** 537 Lepomis macrochirus (Bluegill sunfish) 14 d Measured

### **Propylene glycol**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water (log Pow):** -1.07 Measured

**Bioconcentration factor (BCF):** 0.09 Estimated.

### **Balance**

**Bioaccumulation:** No relevant data found.

### **Mobility in Soil**

#### **Bupropfen**

Potential for mobility in soil is slight (Koc between 2000 and 5000).

**Partition coefficient (Koc):** 2150 - 5741

### **Propylene glycol**

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** < 1 Estimated.

**Balance**

No relevant data found.

**Results of PBT and vPvB assessment****Bupropion**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Propylene glycol**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Balance**

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

**Other adverse effects****Bupropion**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Propylene glycol**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Balance**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer

---

---

**SECTION 13: DISPOSAL CONSIDERATIONS**

---

---

**Disposal methods:** If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

This product when disposed of in its unused and uncontaminated state should be treated as a hazardous waste.

---

---

**SECTION 14: TRANSPORT INFORMATION**

---

---

**ADG**

Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**

Not regulated for transport

**Transport in bulk  
according to Annex I or II  
of MARPOL 73/78 and the  
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

Not regulated for transport

**Hazchem Code:** •2X

