

Material Safety Data Sheet

Pilan[®]

Date of issue: 30th April, 2011







1) Identification of Substance:	
Product name:	Pilan
Active Ingredient(s):	Buprofezin
ACVM Approval:	P7084
ERMA Approval:	HSR000135
Distributed by:	Adria Crop Protection P.O. Box 535 Kumeu 1250, Auckland Ph: 09-412-9817 Fax: 09-412-9807 www.adriacp.co.nz
Emergency Number:	National Poisons Centre 0800 POISON 0800 764 766
2) Hazards Identification:	
HSNO Classifications:	6.1E, 6.3B, 6.9B, 9.1B, 9.4C
Human health hazards	Harmful if swallowed, inhaled, or absorbed through the skin. Causes mild eye irritation. Product is a white powder.
Routes of exposure	Dust inhalation. Skin contact.
Signs and symptoms of overexposure	Symptoms from excessive ingestion of buprofezin tech may include subdued mood, slight muscular incoordination, and a slightly enlarged abdomen.
Potential health effects	
Eye contact	Contact with this product causes moderate eye irritation.
Ingestion	No specific health effects are known for ingestion of a small amount incidental to routine handling and use. Ingestion of large amounts may be harmful.
Inhalation	Inhalation of this product is harmful. The active ingredient is not known to be inhaled. Inhalation of the inert ingredients in a confined area may cause irritation and congestion of the upper respiratory tract.
Skin contact	Absorption through the skin is harmful. This product is a slight skin irritant but not a skin sensitizer.

3) Composition Details:		
Chemical identity:		Buprofezin
Chemical identity of ingredients:		
Ingredient:	CAS No.:	Content (%w/v)
Buprofezin	69327-76-0	25%
4) First Aid Measures:		
Skin contact:	Wash with plenty of soap and water. Get medical attention if irritation persists.	
Eye contact:	Flush eyes with plenty of water. Call a physician if irritation persists.	
Ingestion:	Call a physician or the poison control centre. Drink one of two glasses of water. Induce vomiting by touching the back of the throat with finger, or if available, by administering syrup of ipecac. If the person is unconscious, do not give anything by mouth and do not induce vomiting. For advice, contact the National Poisons Centre on 0800 POISON (0800 764766) or a doctor immediately.	
Inhalation:	Remove the victim to fresh air. If not breathing, give the victim artificial respiration, preferably mouth to mouth. Get medical attention.	
Note to physician:	Provide supportive care and symptomatic treatment (eye/respiratory/irritation).	
5) Fire-Fighting Measures:		
Extinguishing media	Alcohol-resistant foam, carbon dioxide, dry chemicals, and water spray.	
Hazardous thermal (de)composition products	Carbon dioxide, carbon monoxide, nitrogen oxides, and sulphur dioxide.	
Special fire-fighting procedures	Firemen should wear positive-pressure, self-contained breathing apparatus.	
Protection of fire-fighters	Be sure to use an approved/certified respirator or equivalent.	
6) Accidental Release Measures:		
General and disposal	Take all necessary actions to prevent and remedy the adverse effects of the spill. Ensure that disposal is in compliance with federal requirements and local disposal regulations. Notify the appropriate authorities immediately.	
Land spill and leak	Do not breathe the dust. Use a suitable dust respirator. Avoid contact with skin and eyes. Carefully sweep up the spilled product, avoiding formation of a dust cloud, and place it in a suitable container. Seal the container. The area can be washed with water to remove the last traces of the product, but keep out of watercourses or sewers. Inform authorities immediately if contamination occurs.	

7) Handling & Storage:	
Caution	This product is harmful if swallowed, inhaled, or absorbed through the skin. It causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing, and wash them before reuse.
Users should	<p>Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.</p> <p>Do not apply this product in a way that will contact workers or other person, either directly or through drift.</p> <p>Do not apply this product through any type of irrigation system.</p> <p>Allow only protected handlers in the area during application.</p> <p>For any requirement specific to your state or tribe, consult the agency responsible for pesticide regulation.</p>
8) Exposure Control / Personal Protection:	
Engineering measures	Control airborne contaminants below the exposure guidelines. Use with adequate ventilation to minimize exposure. Local exhaust ventilation may be necessary, especially when the product is used in a confined area.
<p><u>PERSONAL PROTECTION</u></p> <p>Applicators and handlers must wear:</p> <p>If working with plants, soil or water in treated areas during the REI of 12 hours, personnel must wear:</p> <p>Manufacturing and packaging personnel should use this product in well-ventilated areas. In accordance with recommended OSHA standards, they should wear:</p>	<p>Long-sleeved shirts and long pants.</p> <p>Waterproof gloves.</p> <p>Shoes plus socks.</p> <p>Coveralls over long-sleeved shirts and long pants.</p> <p>Waterproof gloves.</p> <p>Socks and chemical-resistant footwear.</p> <p>Impervious gloves (PVC or rubber), especially when prolonged or repeated contact is anticipated.</p> <p>Safety glasses or chemical goggles.</p> <p>Approved dust respirators, especially when handling the product in a confined space.</p>
9) Physical & Chemical Properties:	
Appearance:	Loose Powder
Physical state:	Solid
Odour:	-
Melting point:	-
Density:	-
Acidity:	0.1% max.
Loss on heat:	0.3% min.
pH:	6.0 – 10.5.

Flash point [°C]:	-
Auto Ignition Temperature: [°C]:	-
Fire Hazards in Presence of Various Substances	-
Viscosity:	-
Solubility in water	-
10) Stability & Reactivity:	
Chemical stability:	This product is stable. The active ingredient is stable under dark and cool storage conditions; it is also stable in acid and alkali.
Thermal stability:	130°C, Max. for buprofezin Tech.
Incompatibility with other materials:	None known.
Hazardous decomposition product:	May decompose at extreme high temperatures to form oxides of carbon, nitrogen and sulphur.
Hazardous polymerization:	None known.
11) Toxicological Information:	
<u>Acute toxicity:</u> - Oral Rat LD50 - Dermal Rat LD50 - Inhalation Rat LC50 - Eye irritation - Skin irritation: Rabbit Guinea pig	>5,000 mg/kg (slightly toxic) >2,000mg/kg (moderately toxic) >2.2 mg/l (4hrs) causes moderate eye irritation Slightly irritation (pH=1.146) Not a skin sensitizer.
Subchronic (target organ effects):	Buprofezin Tech was shown to have no target organ effects in the 90-day animal studies at dietary levels up to the tested mid-dose: 50mg/kg per day in dogs and approximately 18 mg/kg/day in rats. At the extreme experimental doses (300 mg/kg/day in dogs an approximately 95mg/kg/day in rats), effects of enlarged livers were observed in animals after prolonged feeding. Enlarged thyroid was also seen in rats at dose levels >98mg/kg/day (>1000ppm).
Chronic (cancer information):	In 2-year feeding studies with Buprofezin Tech, the no effect levels in the three tested animals were all at a similar dose of approximately 2mg/kg/day dogs:2mg/kg/day;rats/mice: 20ppm=1.8/0.9 mg/kg/day). At the high doses of 200 mg/kg/day or greater, toxic chronic effects of Buprofezin Tech were seen in all tested dogs, rats, and mice. These include increase liver weights (all species), increased thyroid weight (dogs, rats), elevated incidences of hyperplasia or hypertrophy of hepatocytes (rats, mice), and hyperplasia of thyroid epithelial cells (only in rats). However, no treatment-related increases in tumor incidences in livers or thyroids were reported for all three animal species tested in these 2-year feeding studies.

Teratogenicity (birth defect)	<p>Pregnant rats in a teratology study were administered orally with three dose levels of Buprofezin Tech (50, 200 and 800 mg/kg/day) for day 6 to day 15 during the 20-day gestation period. No teratogenic effects of buprofezin were observed in pregnant rats at dose levels up to 200 mg/kg/day. At the highest test dose of 800 mg/kg/day, buprofezin Tech exhibited significant effects on the maternal performance (increased litter resorption, post implantation loss, and reduced litter size) and on the fetal growth/development.</p> <p>In a separate rabbit teratology study, buprofezin Tech (10, 50 or 250 mg/kg/day) showed no significant adverse effects on fetal development and fetal survival in utero even at the highest test dose; the effects observed at the 250 mg/kg/day were on the maternal toxicity (reduced food intake and weight loss). The no-effect level of Buprofezin Tech in rabbits was 50 mg/kg/day.</p>
Reproductive effects	<p>In two multigeneration reproduction studies in rats administered with the three tested dose levels (10, 100 and 1000ppm), Buprofezin Tech had no adverse effects on the reproductive performances of the parental rats (fertility/pregnancy), the survival and growth/development of the pups in each generation, and the female parturition status (labor/delivery process). The only effects observed were a decrease in body weight gain of pups from the 1000ppm group.</p>
Mutagenicity (genetic effect)	<p>Buprofezin Tech is not mutagenic or genotoxic when tested in AMES's salmonella gene mutation assay and in two other in vitro mutagenesis systems (mouse lymphoma cells and primary rat hepatocytes). Buprofezin Tech was also not mutagenic when tested in an in vivo system, since it did not induce micronuclei formations in bone marrow erythrocytes from mice administered with extreme experimental doses (6,400-10,000mg/kg/day)</p>
12) Ecological Information:	
Ecotoxicity	<p>Triclopyr Butoxy ethyl ester: 0.7 mg/l, 96 hours [Fish]. Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.</p>
Environmental Hazards	<p>Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.</p>
13) Disposal Considerations:	
Disposal:	<p>Dispose of empty packaging safely. Burn, if circumstances, especially wind direction permit, otherwise bury in landfill. Avoid contamination of any water supply with chemical or empty packaging.</p>

14) Transportation Information:	
Rail/road (RID/ADR):	UN2588 ENVIRONMENTALLY HAZARDOUS SUBSTANCE. BUPROFEZIN 25%, POWDER, N.O.S Class: 9 Packaging Group III UN: 2588  
Sea (IMDG code):	UN2588 ENVIRONMENTALLY HAZARDOUS SUBSTANCE. BUPROFEZIN 25%, POWDER, N.O.S Class: 9 Packaging Group III UN: 2588 Marine Pollutant  
Air (ICAO/IATA):	UN2588 ENVIRONMENTALLY HAZARDOUS SUBSTANCE. BUPROFEZIN 25%, POWDER, N.O.S Class: 9 Packaging Group III UN: 2588  
15) Regulatory Information:	
Approved handlers:	This product must be under the care of an approved handler during use.
Tracking:	No.
ACVM controls:	See www.nzfsa.govt.nz/acvm/ for registration conditions.

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