



BAYER CROP SCIENCE

P.O. Box 4913 Hawthorn Road
Kansas City, MO 64120-0013

TRANSPORTATION EMERGENCY

CALL CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

NON-TRANSPORTATION

BAYER EMERGENCY PHONE...: (800) 414-0244
BAYER INFORMATION PHONE.: (800) 842-8020

1. CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT NAME.....: Bayer Professional Care PRE-EMPT Liquid Ant Bait
Insecticide Ready-to-Use
PRODUCT CODE.....: 21732
CHEMICAL FAMILY.....: Chloronicotinyl
CHEMICAL NAME.....: 1-((6-chloro-3-pyridinyl)methyl)-N-nitro-
2-imidazolidinimine
SYNONYMS.....: Imidacloprid
FORMULA.....: C9 H10 Cl N5 O2
PRODUCT USE.....: Commercial Insecticide

2. COMPOSITION/INFORMATION ON INGREDIENTS:

INGREDIENT NAME /CAS NUMBER EXPOSURE LIMITS CONCENTRATION (%)

***** HAZARDOUS INGREDIENTS *****

Imidacloprid
138261-41-3 OSHA : Not Established 0.005 %
ACGIH: Not Established

3. HAZARDS IDENTIFICATION:

* EMERGENCY OVERVIEW *
* CAUTION! Color: White; Form: Liquid; Odor: Not *
* established; Causes eye irritation. *

3. HAZARDS IDENTIFICATION (Continued)

POTENTIAL HEALTH EFFECTS:

ROUTE(S) OF ENTRY.....: Skin Contact; Eye Contact

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE EFFECTS OF EXPOSURE.....: No specific symptoms of acute overexposure are known to occur in humans. Based on EPA Toxicity Category criteria, this product is essentially non-toxic by the oral and dermal routes of exposure. In addition, animal studies have shown that this material is minimally irritating to the eye and slightly irritating to the skin.

CHRONIC EFFECTS OF EXPOSURE...: No specific symptoms of chronic overexposure are known to occur in humans.

CARCINOGENICITY.....: This product is not listed by NTP, IARC or regulated as a carcinogen by OSHA.

MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE.....: No specific medical conditions are known which may be aggravated by exposure to this product.

4. FIRST AID MEASURES:

FIRST AID FOR EYES.....: Hold eye 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 eye. Call a poison control center or doctor for treatment advice.

FIRST AID FOR SKIN.....: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

FIRST AID FOR INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

FIRST AID FOR INGESTION.: Call poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything to an unconscious person.

NOTE TO PHYSICIAN.....: Treat symptomatically. It is also requested that Bayer Corp., Agriculture Division, Kansas City, Missouri, be notified. Telephone: 1-800-414-0244

5. FIRE FIGHTING MEASURES:

FLASH POINT.....: Greater than 200 F (93 C)

EXTINGUISHING MEDIA.....: Water; Carbon Dioxide; Dry Chemical; Foam

5. FIRE FIGHTING MEASURES (Continued)

SPECIAL FIRE FIGHTING PROCEDURES: Keep out of smoke, cool exposed containers with water spray. Fight fire from upwind position. Use self-contained breathing equipment. Contain run-off by diking to prevent entry into sewers or waterways. Equipment or materials involved in pesticide fires may become contaminated.

6. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES.....: Isolate area and keep unauthorized people away. Do not walk through spilled material. Avoid breathing vapors and skin contact. Wear proper protective equipment. Dike contaminated area with absorbent granules, soil, sand, etc. If large spill, material should be recovered. Small spills can be absorbed with absorbent granules, spill control pads, or any absorbent material. Carefully sweep up absorbed spilled material. Place in covered container for reuse or disposal. Scrub contaminated area with soap and water. Use dry absorbent material such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE (MIN/MAX): None/30 day average not to exceed 100 F.
SHELF LIFE.....: Time/temperature-dependent, contact Bayer for specific information.
SPECIAL SENSITIVITY.....: Not established
HANDLING/STORAGE PRECAUTIONS: Store in a cool dry area designated specifically for pesticides. Do not store near any material intended for use or consumption by humans or animals.

8. PERSONAL PROTECTION:

EYE PROTECTION REQUIREMENTS.....: Goggles
SKIN PROTECTION REQUIREMENTS.....: Long sleeves and trousers
HAND PROTECTION REQUIREMENTS.....: Chemical-resistant gloves such as latex or nitrile are recommended as good practice.
RESPIRATOR REQUIREMENTS.....: When needed under the conditions of use, wear a NIOSH-approved particulate respirator.
ADDITIONAL PROTECTIVE MEASURES.....: Clean water should be available for washing in case of eye or skin contamination. Educate and train employees in safe use of the product. Follow all label instructions. Launder

8. PERSONAL PROTECTION (Continued)

clothing after use. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM.....: Liquid
COLOR.....: White
ODOR.....: Not established
MOLECULAR WEIGHT.....: 255.7 (for imidacloprid)
BOILING POINT.....: ca. 100 C (212 F)
MELTING/FREEZING POINT.....: ca. 0 C (32 F)
SOLUBILITY IN WATER: 0.51 g/L @20 C (for Imidacloprid)
SPECIFIC GRAVITY: 1.106
BULK DENSITY.....: Not applicable
% VOLATILE BY VOLUME.....: Not established
VAPOR PRESSURE: 1.5 x 10⁻⁹ Torr @ 20 C (for imidacloprid)
VAPOR DENSITY: Not established (Air = 1)

10. STABILITY AND REACTIVITY:

STABILITY.....: This is a stable material.
HAZARDOUS POLYMERIZATION...: Will not occur.
INCOMPATIBILITIES.....: None known
INSTABILITY CONDITIONS.....: None known
DECOMPOSITION PRODUCTS.....: None known

11. TOXICOLOGICAL INFORMATION:

Acute toxicity studies have not been performed on this product as formulated. The acute toxicology information provided below is from a similar formulation, PRE-EMPT Professional Cockroach Gel Bait, containing a higher percentage of the active ingredient, imidacloprid. The non-acute information pertains to imidacloprid technical.

ACUTE TOXICITY

ORAL LD50.....: Male and Female Rat: >5000 mg/kg
DERMAL LD50.....: Male & Female Rat: >5000 mg/kg
INHALATION LC50....: No Data Available
EYE EFFECTS.....: Rabbit: Minimum irritation to the iris and conjunctiva was observed with all irritation cleared by 48 hours post-treatment.
SKIN EFFECTS.....: Rabbit: Slight dermal irritant.
SENSITIZATION.....: Guinea Pig: Not a dermal sensitizer.
SUBCHRONIC TOXICITY...: In a 3 week dermal toxicity study, rabbits were treated

11. TOXICOLOGICAL INFORMATION (Continued)

with the active ingredient, imidacloprid, at the limit dose level of 1000 mg/kg for 6 hours/day, 5 days/week. There were no local or systemic effects observed at any of the levels tested. The no-observed-effect-level (NOEL) was 1000 mg/kg. In a 4 week inhalation study, rats were exposed to dust concentrations of imidacloprid at 5.5, 30.5 and 191.2 mg/cubic meter for 6 hours/day, 5 days/week. Effects observed at the high concentration included decreased body weight gains, decreased heart and thymus weights, increased liver weights, and induction of the hepatic mixed-function oxidases. Histopathological examinations did not reveal any organ damage or local injury to the respiratory tract. The NOEL was 5.5 mg/cubic meter based on induction of the hepatic mixed-function oxidases.

CHRONIC TOXICITY.....: Dogs were administered imidacloprid for 1 year at dietary concentrations of 200, 500 or 1250 ppm. Due to the lack of significant effects, the high dose was increased to 2500 ppm at 17 weeks for the remainder of the study. Effects observed at the high dose included decreased food consumption, increased liver weights and elevated serum chemistries. The NOEL was 500 ppm. In chronic studies using rats, imidacloprid was administered for 2 years at dietary concentrations of 100, 300, 900 or 1800 ppm. Histopathology examinations revealed an increased incidence of mineralization in the colloid of the thyroid follicles at concentrations of 300 ppm and greater. At 1800 ppm, there were changes in the serum chemistries and a slight increase in the incidence of parafollicular hyperplasia seen in the thyroids. Body weight gains were reduced at 900 and 1800 ppm. The overall NOEL was 100 ppm.

CARCINOGENICITY.....: Imidacloprid was investigated for carcinogenicity in chronic feeding studies using mice and rats at maximum levels of 2000 and 1800 ppm, respectively. There was no evidence of a carcinogenic potential observed in either species.

MUTAGENICITY.....: The imidacloprid mutagenicity studies, taken collectively, demonstrate that the active ingredient is not genotoxic or mutagenic.

DEVELOPMENTAL TOXICITY: In a developmental toxicity study using rats, imidacloprid was administered by oral gavage during gestation at doses of 10, 30 or 100 mg/kg. At the maternally toxic dose of 100 mg/kg, skeletal examinations of the fetuses revealed a slight increase in the incidence of wavy ribs. The NOELs for maternal and developmental toxicity were 10 and 30 mg/kg, respectively. Teratogenic effects were not observed at any of the doses tested. Rabbits were administered imidacloprid during gestation at oral doses of 8, 24 or 72 mg/kg. At the maternally toxic dose of 72 mg/kg, reduced body weights and delayed skeletal ossification were observed in the fetuses. The NOELs for maternal and developmental toxicity were 8 and 24 mg/kg, respectively. Teratogenic effects were not observed at any of the doses tested.

REPRODUCTION.....: In a reproduction study, imidacloprid was administered to rats for 2 generations at dietary concentrations of 100, 250 or 700 ppm. Offspring at 700 ppm, exhibited reduced mean body weights and body weight gains. No other reproductive effects were observed. The maternal and reproductive NOELs were 100 and 250 ppm, respectively.

NEUROTOXICITY: In an acute neurotoxicity screening study using rats, imidacloprid was administered as a single oral dose at levels of 42, 151 or 307 mg/kg. Clinical observations and neurotoxicity evaluations were performed

11. TOXICOLOGICAL INFORMATION (Continued)

over a period of 15 days followed by a neurohistopathological examination. Deaths attributed to imidacloprid were observed at the high dose within a day of treatment. The NOEL for motor and locomotor activity was 42 mg/kg for males. Females at the low dose exhibited minimal decrease in activity in the figure-eight maze. In a subsequent study, the NOEL for motor and locomotor activity in females was 20 mg/kg. All clinical signs and neurobehavioral effects were ascribed to acute cholinergic toxicity, with complete recovery at sub-lethal doses within 7 days following treatment. The NOEL for neurotoxicity was 307 mg/kg based on the absence of treatment-related microscopic lesions in skeletal muscle or neural tissue. In a 13 week neurotoxicity screening study, imidacloprid was administered to rats at dietary concentrations of 140, 963 or 3027 ppm. At the mid- and high-dose, effects observed included reductions in body weight and feed consumption, and clinical chemistry findings. Neurobehavioral changes were observed only in males at the high dose. There were no correlative micropathologic findings in muscle or neural tissues in any animals at any treatment level. The NOEL for neurotoxicity was 3027 ppm. The overall NOEL was 140 ppm. In a one generation developmental neurotoxicity screening study, imidacloprid was administered to rats a dietary concentrations of 100, 250, or 750 ppm during gestation and postnatal development. Maternal toxicity occurred at the highest concentration and included decreased food consumption. In the offspring, effects occurred only in conjunction with maternal toxicity, and included decreased body weight and decreased motor activity. There were no morphological changes in the neural tissues at any dietary level. The overall NOEL for both maternal and offspring toxicity was 250 ppm.

12. ECOLOGICAL INFORMATION:

This product is highly toxic to aquatic invertebrates. Bayer will provide a summary of specific data upon written request. As with any pesticide, this product should be used according to label directions and should be kept out of streams, lakes or other aquatic habitats of concern. In event of a spill emergency, contact Bayer at 1-800-414-0244.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD.....: Follow container label instructions for disposal of wastes generated during use in compliance with the product label. In other situations, bury in an EPA approved landfill or burn in an incinerator approved for pesticide destruction. Do not reuse container.

14. TRANSPORTATION INFORMATION:

TECHNICAL SHIPPING NAME.....: Imidacloprid
FREIGHT CLASS BULK.....: Insecticides, NOI-NMFC 102120
FREIGHT CLASS PACKAGE.....: Insecticides, NOI-NMFC 102120
PRODUCT LABEL.....: BPC PRE-EMPT Liquid Ant Bait Insecticide
Ready-to-Use

DOT (DOMESTIC SURFACE)

HAZARD CLASS OR DIVISION: Non-Regulated

IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

15. REGULATORY INFORMATION:

OSHA STATUS.....: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS.....: This product is exempt from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.

CERCLA REPORTABLE QUANTITY...: No components listed

SARA TITLE III:

SECTION 302 EXTREMELY

HAZARDOUS SUBSTANCES...: None

SECTION 311/312

HAZARD CATEGORIES.....: Immediate Health Hazard

SECTION 313

TOXIC CHEMICALS.....: None

RCRA STATUS.....: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

