

Material Safety Data Sheet

BITHOR SC

Emergency Phone 1-800-424-9300 (Chemtrec)

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: BITHOR SC

CHEMICAL NAME: Imidacloprid plus Bifenthrin

CHEMICAL FAMILY: Chloro-nicotinyl plus pyrethroid insecticide

COMPANY: Ensystem IV, Inc.

ADDRESS: 2713 Breezewood Ave., Fayetteville, NC 28303

DAYTIME PHONE: 1-866-367-8467

2. COMPOSITION / INFORMATION ON INGREDIENTS

Imidacloprid 5.0% CAS# 138261-41-3

Bifenthrin 4.0% CAS# 82657-04-3

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Caution. Harmful if swallowed or absorbed through the skin.

PHYSICAL STATE: Viscous liquid suspension

ODOR: Mild

APPEARANCE: Off white to light brown

ROUTES OF EXPOSURE: Inhalation, skin contact, eye contact

IMMEDIATE EFFECTS

EYE: May cause mild eye irritation. Avoid contact with eyes.

SKIN: May cause slight irritation. Avoid contact with skin and clothing.

INGESTION: Harmful if swallowed. Do not take internally.

INHALATION: Inhalation not likely.

4. FIRST AID MEASURES

EYES: Hold eye open and rinse slowly and gently with water for 15 to 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.

SKIN: Take off contaminated clothing and shoes immediately. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Rinse out mouth and have 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. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

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

NOTES TO MEDICAL DOCTOR: This product contains a pyrethroid. Treat symptomatically. There is no antidote.

5. FIRE FIGHTING MEASURES

FLASH POINT: >93°C / > 199 °F

EXTINGUISHING MEDIA: Water spray, Carbon dioxide, dry chemical powder or appropriate foam.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride gas, Nitrogen oxides.

SUITABLE EXTINGUISHING MEDIA: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

FIRE FIGHTING PROCEDURES: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated. Keep out of smoke. Fight fire from an upwind position. Cool closed containers exposed to fire with water spray. Dike area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTION(S): Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8, "Exposure Controls/Personal Protection". Keep unprotected persons and animals out of the area.

METHOD FOR CLEANING UP: Dike area to prevent runoff. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder,

universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Collect and transfer the product into a properly labeled and tightly closed container. Do not allow material to enter streams, sewers, or other waterways. You may contact Ensystem III at 1-866-367-8467 for assistance if necessary. You may also contact Chemtrec at 1-800-424-9300 for assistance.

7. HANDLING AND STORAGE

STORAGE PROCEDURES: Store in a cool, dry, well-ventilated and preferably locked storage area. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal. Store in original containers only. Keep storage container tightly closed. Do not freeze.

WORK/HYGENIC PROCEDURES: Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: General air replacement or dilution ventilation is sufficient for material handling and storage.

PERSONAL PROTECTIVE EQUIPMENT: Applicators and other handlers must wear long-sleeved shirt and long pants and shoes plus socks (PPE). Follow manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

USER SAFETY RECOMMENDATIONS: Wash hands before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

EXPOSURE LIMITS: Glycerine CAS # 56-81-5 ACGIH TWA 10 mg/m3 Form of exposure - Mist

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Off-white to light brown

PHYSICAL STATE: Viscous liquid suspension

ODOR: Mild

WATER SOLUBILITY: Dispersible

10. STABILITY AND REACTIVITY

STABILITY: Stable under recommended storage conditions.

11. TOXICOLOGICAL INFORMATION

The non-acute information pertains to the active ingredient.

ACUTE TOXICITY

EYE EFFECTS: Mild eye irritation (rabbits)

SKIN SENSITIZATION: No (guinea pig)

SKIN IRRITATION: Slight (rabbit)

ACUTE ORAL TOXICITY FEMALE RAT: LD50 > 1,030 mg/kg

ACUTE DERMAL TOXICITY FEMALE RAT: LD50: > 5,000 mg/kg

ACUTE INHALATION TOXICITY FEMALE COMBINED RAT: LC50 - 4-hr exposure to liquid aerosol: 2.03 mg/l (actual). LC50: 1-hr exposure to liquid aerosol: 8.12 mg/l (Extrapolated from 4 hr. LC50.)

SUBCHRONIC TOXICITY

IMIDACLOPRID TECHNICAL

In a 3-week dermal toxicity study, rabbits treated with imidacloprid showed no local or systemic effects at levels up to and including 1000 mg/kg, the limit dose. In a 4-week inhalation study, rats exposed to high concentrations of imidacloprid exhibited decreased body weight gains and changes in clinical chemistries and organ weights.

BIFENTHRIN TECHNICAL

In a 21-day dermal toxicity study in rabbits, bifenthrin caused a loss of muscle coordination. In subchronic toxicity studies, tremors were observed in rats and dogs following dietary exposure to bifenthrin.

CHRONIC TOXICITY

IMIDACLOPRID TECHNICAL

In chronic dietary studies in rats and dogs exposed to imidacloprid, the target organs were the thyroids and/or liver.

BIFENTHRIN TECHNICAL

The principal effect observed in rats, mice and dogs from long-term exposure to bifenthrin was clinical signs of toxicity (e.g., tremors).

ASSESSMENT CARCINOGENICITY

IMIDACLOPRID TECHNICAL

In oncogenicity studies in rats and mice, imidacloprid was not considered carcinogenic in either species.

BIFENTHRIN TECHNICAL

Bifenthrin was not carcinogenic in a chronic feeding study in rats. In an oncogenicity study in mice, there was an increased incidence of tumors (urinary bladder, liver, lung). EPA classified bifenthrin as Group C (possible human carcinogen) chemical based on urinary bladder tumors in mice. The Agency used a nonlinear methodology approach for determining the Margin of Exposure (MOE) for the estimation of cancer risk. Therefore, EPA has a reasonable certainty that no harm will result from exposure to residues of bifenthrin.

CARCINOGENICITY

IARC: Not listed

NTP: Not listed

OSHA: Not listed

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY

IMIDACLOPRID TECHNICAL

REPRODUCTION: In a two-generation reproduction study in rats, imidacloprid was not a primary reproductive toxicant. Offspring exhibited reduced body weights at the high dose and in conjunction with maternal toxicity.

DEVELOPMENTAL TOXICITY: In developmental toxicity studies in rats and rabbits, there was no evidence of an embryotoxic or teratogenic potential for imidacloprid. In both species, developmental effects were observed only at high doses and in conjunction with maternal toxicity.

BIFENTHRIN TECHNICAL

REPRODUCTION: Bifenthrin is not a reproductive toxicant based on a multigeneration reproduction study in rats.

DEVELOPMENTAL TOXICITY: Bifenthrin is not a developmental toxicant based on developmental toxicity studies in rats and rabbits.

NEUROTOXICITY

IMIDACLOPRID TECHNICAL

In acute and subchronic neurotoxicity screening studies in rats, imidacloprid produced slight neurobehavioral effects in each study at the highest dose tested. There were no correlating morphological changes observed in the neural tissues.

In a one-generation developmental neurotoxicity screening study in rats, offspring exposed to imidacloprid showed decreased motor activities. These effects occurred at the highest dose tested and in conjunction with maternal toxicity. There were no correlating morphological changes observed in the neural tissues.

BIFENTHRIN TECHNICAL

Bifenthrin did not cause delayed neurotoxicity in hens. In acute and subchronic neurotoxicity screening studies in rats, transient well-defined neurobehavioral effects were seen without correlating morphological changes in the neural tissues.

MUTAGENICITY

IMIDACLOPRID TECHNICAL

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

BIFENTHRIN TECHNICAL

Bifenthrin is not considered genotoxic or mutagenic based on in vitro and in vivo mutagenicity studies.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL PRECAUTIONS: This pesticide is highly toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

ECOLOGICAL INFORMATION: This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

13. DISPOSAL CONSIDERATIONS

GENERAL DISPOSAL GUIDANCE: Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of at an approved waste facility in accordance with applicable Federal, state and local laws and regulations.

CONTAINER DISPOSAL: Follow advice on product label and/or leaflet.

14. TRANSPORT INFORMATION

DOT CLASSIFICATION: Not regulated.

FREIGHT CLASSIFICATION: Insecticides or Fungicides, N.O.I., other than poison

15. REGULATORY INFORMATION

CERCLA REPORTABLE QUANTITY: No components listed.

Sara Title III – section 313 – Toxic Chemical Release Reporting:

Bifenthrin 82657-04-3 1.0%

16. OTHER INFORMATION

NFPA 704: (National Fire Protection Association)

Health - 2 Flammability - 1 Reactivity - 1 Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Revised 03/07