

Material Safety Data Sheet

Knox Fertilizer Company, Inc.

SECTION 1

PRODUCT IDENTIFICATION

TRADE NAME: **Shaw's® Turf Food Insect Control 69/Talstar®**

EPA REGISTRATION NO: 279-3216-8378
CHEMICAL FAMILY: Fertilizer with Pyrethroid Insecticide
CHEMICAL NAME/SYNONYMS: Talstar®, Bifenthrin

MANUFACTURER/FORMULATOR: Knox Fertilizer Co., Inc
P.O. Box 248
Knox, IN 46534
EMERGENCY PHONE: 1.800.424.9300

SECTION 2

COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients	CAS No.	% by Weight	PEL/TLV
Bifenthrin	82657-04-3	0.069	None Established
Inert Ingredients		99.931	

SECTION 3

HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Likely Routes of Exposure: Skin, Eyes, Inhalation, Ingestion.

POTENTIAL HEALTH EFFECTS:

Effects from overexposure result from either swallowing the material or the material coming into contact with the skin or eyes. Symptoms of overexposure include lacrimation, tremors and convulsions. Contact with bifenthrin may occasionally produce skin sensations such as rashes, numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours.

Eye Contact: Mildly irritating.

Skin Contact: Mildly irritating.

Ingestion: Overexposure to this product may cause diarrhea.

Inhalation: No data.

Medical Conditions Aggravated by Exposure: No known medical conditions are known which may be aggravated by exposure to active ingredient.

POTENTIAL ENVIRONMENTAL EFFECTS:

Highly toxic to fish and aquatic organisms. Keep out of drains and watercourses.

SECTION 4**FIRST AID MEASURES**

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. Call a poison control center or doctor for treatment advice.

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.

INGESTION: Call a poison control center or doctor immediately for treatment advice. 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. Do not give anything by mouth to an unconscious person.

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.

NOTES TO MEDICAL DOCTOR: This product is expected to have low oral and dermal toxicity. It is expected to be irritating to the skin and eyes. The dust may be irritating to the nose, throat and respiratory tract. Bifenthrin has high toxicity by the ingestion route of exposure. Gastric lavage using an endotracheal tube may be preferred to vomiting. Reversible skin sensations (parathesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

SECTION 5**FIRE FIGHTING MEASURES**

FLASH POINT (Method):

Not Applicable

FLAMMABLE LIMITS (LEL & UEL):

Not Applicable

EXTINGUISHING MEDIA:

Dry chemical, CO₂, or foam. Soft stream water fog only if necessary. Contain all runoff.

HAZARDOUS COMBUSTION PRODUCTS:

May include but are not limited to oxides of carbon, hydrogen chloride, hydrogen fluoride, oxides of nitrogen, oxides of phosphorus, oxides of sulfur, hydrogen sulfide.

SPECIAL FIRE FIGHTING PROCEDURES:

Isolate fire area. Evacuate downwind. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke, gases or vapors.

UNUSUAL FIRE & EXPLOSION HAZARDS:

Slightly combustible. This material may support combustion at elevated temperatures. If heated to decomposition, the fertilizer contained in this product will give off toxic vapors of ammonia and formaldehyde. Under fire conditions, urea may decompose to cyanuric acid, biuret or ammonia. Dispersion of fine dust in the air may form an explosive mixture.

SECTION 6**ACCIDENTAL RELEASE MEASURES**

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: If material is spilled, isolate and post spill area. Wear protective clothing and personal protective equipment as noted in Section 8 (below). Keep unprotected persons and animals out of the area. Keep material out of lakes, streams, ponds and sewer drains. Large spills should be covered to prevent dispersal. For dry material, use a wet sweeping compound or water to prevent the formation of dust. If water is used, prevent runoff or dispersion of excess liquid by diking and absorbing with a non-combustible absorbent such as clay, sand, or soil. Vacuum, shovel or pump all waste material, including absorbent, into a drum and label contents for disposal. To clean and neutralize spill areas, tools and equipment, wash with a suitable solution of caustic or soda ash and an appropriate alcohol (methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb any excess liquid and add to the drums of the waste already collected. Repeat if necessary. Dispose of drummed waste according to Section 13 (below).

SECTION 7**HANDLING AND STORAGE**

Store in a cool, dry, well-ventilated area. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

SECTION 8**EXPOSURE CONTROL/PERSONAL PROTECTION**

ENGINEERING CONTROLS:	Use local exhaust at all process locations where dust may be emitted. Ventilate all transport vehicles prior to unloading.
RESPIRATORY PROTECTION:	For dust exposures wear, as a minimum, a properly fitted half-face or full-face air purifying respirator, which is approved for pesticides (NIOSH/MSHA). Respirator use and selection must be based on airborne concentrations.
EYE PROTECTION:	For dust exposure, wear chemical protective goggles or a face shield.
GLOVES:	Chemical protective gloves (nitrile). Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.
PROTECTIVE CLOTHING:	Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit, such as a PVC suit. Leather items – such as shoes, belts and watchbands – that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).
WORKER HYGENIC PRACTICES:	Clean water should be available for washing in case of eye or skin contamination. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Shower at the end of the workday.
GENERAL COMMENTS:	Personal protective recommendations for mixing or applying this product are prescribed on the product label. Information stated above provides useful, additional guidance for individuals whose use or handling of this product is not guided by the product label.

SECTION 9**PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE AND ODOR: Multi-colored granules with slightly musty odor.	
SPECIFIC GRAVITY: Not Applicable	SOLUBILITY IN WATER: Not Soluble
VAPOR PRESSURE: Not Applicable	VAPOR DENSITY: Not Applicable
BOILING POINT: Not Applicable	MELTING POINT: Not Applicable
PERCENT VOLATILE: Not Applicable	pH: Not Applicable
EVAPORATION RATE: Not Applicable	BULK DENSITY: 45 – 65 lbs./cu ft.

SECTION 10**STABILITY AND REACTIVITY**

STABILITY:	Stable
CONDITIONS TO AVOID:	Excessive heat and fire
INCOMPATIBLE MATERIALS:	Strong acids, caustic compounds
HAZARDOUS POLYMERIZATION:	Not known to occur.

HAZARDOUS DECOMPOSITION PRODUCTS:

If heated to decomposition, may give off ammonia and formaldehyde as well as cyanuric acid, biuret and oxides of nitrogen, carbon and sulfur,

SECTION 11**TOXICOLOGICAL INFORMATION****TOXICOLOGICAL DATA:**

Oral: Rat LD₅₀: >5,000 mg/kg

Dermal: Rat LD₅₀: >2,000 mg/kg

Eye Irritation: Expected to be irritating to the eyes.

Skin Irritation: Expected to be irritating to the skin.

Skin Sensitization: Not expected to produce skin sensitization.

ACUTE EFFECTS FROM OVEREXPOSURE: This product is expected to have low oral and dermal toxicity. It is expected to be irritating to the skin and eyes. The dust may be irritating to the nose, throat and respiratory tract. Bifenthrin does not cause acute delayed neurotoxicity. Experience to date indicates that contact with bifenthrin may occasionally produce skin sensations such as rashes, numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours.

CHRONIC EFFECTS FROM OVEREXPOSURE: No data for the formulation. In studies with laboratory animals, bifenthrin did not cause reproductive toxicity or teratogenicity. Tremors were associated with repeated exposure of laboratory animals to bifenthrin. In lifetime feeding studies conducted with rodents, a slight increase in the incidence of urinary bladder tumors at the highest dose in male mice was considered to be an equivocal response, not evidence of a clear compound-related effect. The overall absence of genotoxicity has been demonstrated in mutagenicity tests with bifenthrin.

CARCINOGENICTY: Not listed as a carcinogen

SECTION 12**ECOLOGICAL INFORMATION**

Unless otherwise indicated, the data presented below are for the active ingredient.

ENVIRONMENTAL DATA: In soil, bifenthrin is stable over a wide pH range and degrades at a slow rate that is governed by soil characteristics. Bifenthrin will also persist in aquatic sediments. Bifenthrin has a high Log Pow (>6.0), a high affinity for organic matter, and is not mobile in soil. Therefore there is little potential for movement into ground water. There is the potential for bifenthrin to bioconcentrate (BCF=11,750).

ECOTOXICOLOGICAL DATA: Bifenthrin is highly toxic to fish and aquatic arthropods and LC₅₀ values range from 0.0038 to 17.8 ug/L. In general, the aquatic arthropods are the most sensitive species. Care should be taken to avoid contamination of the aquatic environment. Bifenthrin had no effect on mollusks at its limit of water solubility. Bifenthrin is only slightly toxic to both waterfowl and upland game birds (LD50 values range from 1,800 mg/kg to >2,150 mg/kg).

SECTION 13**DISPOSAL CONSIDERATIONS**

PRODUCT DISPOSAL: Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because requirements may change, the appropriate agencies should be contacted prior to disposal.

CONTAINER DISPOSAL: Completely empty package into application equipment then dispose of empty package in accordance with all Federal, State and local regulations.

SECTION 14**TRANSPORT INFORMATION****DOT SHIPPING DESCRIPTION:**

Not regulated

U.S. SURFACE FREIGHT CLASSIFICATION:

Fertilizing compounds, NOI; Dry (NMFC 68140, Sub 5; Class 50)

SECTION 15**REGULATORY INFORMATION****SARA TITLE III****SEC 311/312:**Y Immediate (Acute Health)N Delayed (Chronic Health)N FireN Sudden Release of PressureN Reactivity**SEC 302:** Not Applicable**SEC 304:** Not Applicable**SEC 313:** Bifenthrin**CERCLA RQ:** Not Applicable**CAA RQ:** Not Applicable**National Fire Protection Association (NFPA) Ratings:**Health: 1Fire: 1Reactivity: 0Specific: none**SECTION 16****OTHER INFORMATION****Issue Date:** 31 OCT 2005**Supersedes MSDS Dated:** 22 APR 2002

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