

# MATERIAL SAFETY DATA SHEET

## BELEAF™ 50 SG INSECTICIDE



MSDS Ref. No.: 158062-67-0-2

Date Approved: 12/30/2009

Revision No.: 3

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This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200. The information contained herein is for the concentrate as packaged, unless otherwise noted.

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## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** BELEAF™ 50 SG INSECTICIDE  
**PRODUCT CODE:** 6225  
**ACTIVE INGREDIENT(S):** Flonicamid  
**CHEMICAL FAMILY:** Pyridinecarboxamide Insecticide  
**SYNONYMS:** N-(cyanomethyl)-4-(trifluoromethyl)-3-pyridinecarboxamide

### MANUFACTURER

FMC CORPORATION  
Agricultural Products Group  
1735 Market Street  
Philadelphia, PA 19103  
(215) 299-6000 (General Information)  
msdsinfo@fmc.com (Email - General Information)

### EMERGENCY TELEPHONE NUMBERS

(800) 331-3148 (Medical - U.S.A. & Canada)  
(651) 632-6793 (Medical - Collect - All Other Countries)

For leak, fire, spill, or accident emergencies, call:  
(800) 424-9300 (CHEMTREC - U.S.A. & Canada)  
(703) 527-3887 (CHEMTREC - Collect - All Other Countries)

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## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW:

- Light-brown granules with a mild odor.
- Slightly combustible. May support combustion at elevated temperatures. Finely dispersed particles can form explosive mixtures in air.
- Thermal decomposition and burning may form toxic by-products.
- For large exposures or fire, wear personal protective equipment.
- Slightly toxic to fish. Keep out of drains and water courses.

**POTENTIAL HEALTH EFFECTS:** Effects from overexposure may result from either swallowing, inhaling or coming into contact with the eyes.

**MEDICAL CONDITIONS AGGRAVATED:** None presently known.

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt. %	EC No.	EC Class
Flonicamid	158062-67-0	50	None	Not classified
Surfactant Blend		<6	None	Not classified

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### 4. FIRST AID MEASURES

**EYES:** Flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

**SKIN:** Remove contaminated clothing and thoroughly wash with soap and water. If irritation occurs and persists, contact a medical doctor.

**INGESTION:** Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

**INHALATION:** Remove to fresh air. If breathing discomfort occurs and persists, see a medical doctor. If breathing has stopped, give artificial respiration and see a medical doctor immediately.

**NOTES TO MEDICAL DOCTOR:** This product is expected to have low oral, dermal and inhalation toxicity. It is mildly irritating to the eyes, and is expected to be non-irritating and non-sensitizing to the skin. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care.

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### 5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Foam, CO<sub>2</sub> or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

**FIRE / EXPLOSION HAZARDS:** Slightly combustible. May support combustion at elevated temperatures. Finely dispersed particles can form explosive mixtures in air.

**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.

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## 6. ACCIDENTAL RELEASE MEASURES

**RELEASE NOTES:** 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.

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 area, tools and equipment, wash with a suitable solution of strong soap and water. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13, "Disposal Considerations".

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## 7. HANDLING AND STORAGE

**HANDLING AND STORAGE:** Store in a cool, dry, well-ventilated place. 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.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** For dust exposure, wear chemical protective goggles or a face shield.

**RESPIRATORY:** For dust exposures wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator, which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

**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).

**GLOVES:** Wear chemical protective gloves made of materials such as rubber or nitrile. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

**WORK HYGIENIC PRACTICES:** Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum, or using tobacco. Shower at the end of the workday.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>ODOR:</b>	Mild
<b>APPEARANCE:</b>	Light-brown granules
<b>DENSITY / WEIGHT PER VOLUME:</b>	33.5 lb/cu ft (loose); 37.2 lb/cu ft (tapped)
<b>MOLECULAR WEIGHT:</b>	229.16 (Flonicamid)
<b>pH:</b>	6.0 @ 23 °C (1% solution in water)
<b>SOLUBILITY IN WATER:</b>	Soluble (at 1% concentration)

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## 10. STABILITY AND REACTIVITY

<b>CONDITIONS TO AVOID:</b>	Excessive heat and fire.
<b>STABILITY:</b>	Stable
<b>POLYMERIZATION:</b>	Will not occur
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	Under fire conditions, product may decompose to emit hazardous vapors and gases which may be irritating to the respiratory tract.

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## 11. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** Mildly irritating (rabbit)

**SKIN EFFECTS:** No data available for the formulation.  
Similar product: Non-irritating (rabbit)

**DERMAL LD<sub>50</sub>:** No data available for the formulation.  
Similar product: > 2,000 mg/kg (rat)

**ORAL LD<sub>50</sub>:** No data available for the formulation.  
Similar product: > 2,000 mg/kg (rat)

**INHALATION LC<sub>50</sub>:** No data available for the formulation.  
Similar product: > 5.36 mg/l (4 h) (rat)

**SENSITIZATION:** Based on a similar formulation, this product is not expected to produce skin sensitization.

**ACUTE EFFECTS FROM OVEREXPOSURE:** This product is expected to have low oral, dermal and inhalation toxicity. It is mildly irritating to the eyes, and is expected to be non-irritating and non-sensitizing to the skin. No other acute toxicity information is available at this time.

**CHRONIC EFFECTS FROM OVEREXPOSURE:** No data available for the product. Flonicamid is not mutagenic, teratogenic or neurotoxic. It is not a developmental toxicant and it causes no adverse effects on reproductive performance. All scientific data available indicate that widespread agricultural and ornamental use of Flonicamid will not pose a cancer risk to humans.

### **CARCINOGENICITY:**

ACGIH: Not Listed

IARC: Not listed

NTP: Not listed

OSHA: Not listed

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## **12. ECOLOGICAL INFORMATION**

**ENVIRONMENTAL DATA:** Based on a similar formulation, biodegradation in soil is 1 to 10 days.

**ECOTOXICOLOGICAL INFORMATION:** The following information is based on a similar formulation:

LC<sub>50</sub> (96-hour) 70.6 mg/L (Carp, *Cyprinus carpio*) (slightly toxic)  
LC<sub>50</sub> (96-hour) > 100 mg/L (Rainbow trout) (practically non-toxic)  
EC<sub>50</sub> (48-hour) > 100 mg/L (*Daphnia*) (practically non-toxic)

The following information is for Flonicamid Technical:

Practically non-toxic:

LC<sub>50</sub> (96-hour) > 100 mg/L (bluegill sunfish)  
LC<sub>50</sub> (96-hour) > 100 mg/L (rainbow trout)  
LC<sub>50</sub> (96-hour) > 120 mg/L (sheepshead minnow)  
LC<sub>50</sub> (96-hour) > 121 mg/L (mysid shrimp)  
EC<sub>50</sub> (96-hour) > 128 mg/L (eastern oyster)  
EC<sub>50</sub> (48-hour) > 100 mg/L (*daphnia magna*)

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## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be recovered and reused, an acceptable method of disposal is to incinerate in accordance with local, state and national laws and regulations. However, because acceptable methods of disposal may vary by location, and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal.

**EMPTY CONTAINER:** Completely empty package into application equipment. Then dispose of empty package in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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## 14. TRANSPORT INFORMATION

### U.S. DEPARTMENT OF TRANSPORTATION (DOT)

<b>PACKAGING TYPE:</b>	Non-Bulk
<b>ADDITIONAL INFORMATION:</b>	This material is not regulated in transportation.
<b>PACKAGING TYPE:</b>	Bulk
<b>ADDITIONAL INFORMATION:</b>	This material is not regulated in transportation.

### INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)

<b>PACKAGING TYPE:</b>	Non-Bulk
<b>ADDITIONAL INFORMATION:</b>	Not regulated as a hazardous material

### ADR - EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD

<b>PACKAGING TYPE:</b>	Non-Bulk
<b>ADDITIONAL INFORMATION:</b>	Not regulated as a hazardous material

**INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) /  
INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)**

**PACKAGING TYPE:**

Non-Bulk

**ADDITIONAL INFORMATION:**

Not regulated as a hazardous material

**OTHER INFORMATION:**

HARMONIZED SYSTEM

Import to the U.S.A.: 3808.91.5000

Export from U.S.A.: 3808.91.0000

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## **15. REGULATORY INFORMATION**

### **UNITED STATES**

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A):**

Not listed

**SECTION 311 HAZARD CATEGORIES (40 CFR 370):**

Immediate, Delayed

**SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370):**

The Threshold Planning Quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs; however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.:

None

**SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):**

There are no ingredients in this product, which are subject to Section 313 reporting requirements.

**CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)**

**CERCLA DESIGNATION & REPORTABLE QUANTITIES (RQ) (40 CFR 302.4):**

Not listed

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## **16. OTHER INFORMATION**

**NFPA**

Health	1
Flammability	0
Reactivity	0
Special	

NFPA (National Fire Protection Association)

Degree of Hazard Code:

4 = Extreme

3 = High

2 = Moderate

1 = Slight

0 = Insignificant

**REVISION SUMMARY:**

This MSDS replaces Revision #2, dated September 19, 2005.

Changes in information are as follows:

Section 2 (Hazards Identification)

Section 14 (Transport Information)

Section 16 (Other Information)

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