1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: CARBINE® 50 WG INSECTICIDE

Other means of identification

Product Code(s): 6226-A

Synonyms: FLONICAMID: N-cyanomethyl-4-(trifluoromethyl)nicotinamide (IUPAC name); N-(cyanomethyl)-4-(trifluoromethyl)-3-pyridinecarboxamide (CAS name)

Active Ingredient(s): Flonicamid

Chemical Family: Pyridinecarboxamide Insecticide

Alternate Commercial Name: Turbine

Recommended use of the chemical and restrictions on use

Recommended Use: Insecticide

Restrictions on Use: Use as recommended by the label

Manufacturer Address

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
madsinfo@fmc.com (E-Mail General Information)

Emergency telephone number

Medical Emergencies:
1 800 / 331-3148 (PROSAR - U.S.A. & Canada)
1 651 / 632-6793 (PROSAR - All Other Countries - Collect)
For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Specific target organ toxicity (single exposure) Category 2

GHS Label elements, including precautionary statements
**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Chemical Family**  
Pyridinecarboxamide Insecticide.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flonicamid</td>
<td>158062-67-0</td>
<td>50</td>
</tr>
</tbody>
</table>

Synonyms are provided in Section 1.

**4. FIRST AID MEASURES**

**Eye Contact**  
Hold eyes 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 further treatment advice.

**Skin Contact**  
Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

**Inhalation**  
Move to fresh air. If person is not breathing, call 911 (within the U.S. and Canada) or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further 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 a poison control center or doctor Do not give anything by mouth to an unconscious person.

**Most important symptoms and**  
None known.
5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Carbon dioxide (CO₂). Foam. Dry chemical. If necessary: Use water spray or fog; do not use straight streams.

Specific Hazards Arising from the Chemical: Combustible material

Hazardous Combustion Products: Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosion data:
- Sensitivity to Mechanical Impact: Not sensitive.
- Sensitivity to Static Discharge: Not sensitive.


6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Isolate and post spill area. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

Other: For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 “Product and Company Identification” above.

Environmental Precautions: Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains. See Section 12 for additional Ecological Information.

Methods for Containment: Cover powder spill with plastic sheet or tarp to minimize spreading. Use a wet sweeping compound or water to prevent dust formation. Dike far ahead of spill to collect runoff water. Vacuum, shovel or pump waste into a drum and label contents for disposal.

Methods for cleaning up: Clean and neutralize spill area, tools and equipment by washing with bleach water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling: Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal. Reference to other sections.

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep/store only in original container.

Incompatible products: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering measures: Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.
Individual protection measures, such as personal protective equipment

Eye/Face Protection
For dust, splash, mist or spray exposure, wear chemical protective goggles.

Skin and Body Protection
Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection
Protective gloves

Respiratory Protection
For dust, splash, mist or spray exposures wear a filtering mask.

Hygiene measures
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 or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

General information
Clean water should be available for washing in case of eye or skin contamination. Wash hands prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance
Solid Granules

Physical State
Dry powder

Color
Light brown

Odor
Mild

Odor threshold
No information available

pH
6.0 @ 25 °C (1% solution)

Melting point/freezing point
Not applicable

Boiling Point/Range
No information available

Flash point
Not applicable

Evaporation Rate
No information available

Flammability (solid, gas)
No information available

Flammability Limit in Air
Upper flammability limit: No information available
Lower flammability limit: No information available

Vapor pressure
No information available

Vapor density
No information available

Density
33.5 lb/cu ft (loose); 37.2 lb/cu ft (tapped)

Specific gravity
No information available

Water solubility
Soluble in water

Solubility in other solvents
No information available

Partition coefficient
No information available

Autoignition temperature
No information available

Decomposition temperature
No information available

Viscosity, kinematic
No information available

Viscosity, dynamic
No information available

Explosive properties
No information available

Oxidizing properties
No information available

Molecular weight
No information available

Bulk density
No information available

10. STABILITY AND REACTIVITY

Reactivity
None under normal use conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Heat, flames and sparks
CARBINE® 50 WG INSECTICIDE

Incompatible materials
None known.

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating gases and vapors.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral > 2002 2,000 mg/kg (rat)
LD50 Dermal Similar material: > 2002 2,000 mg/kg (rat)
LC50 Inhalation > 5.36 mg/L 4 hr (rat)

Serious eye damage/eye irritation Moderately irritating.
Skin corrosion/irritation Non-irritating during normal use (rabbit).
Sensitization Based on a similar formulation, this product is not expected to produce skin sensitization.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity Flonicamid: Repeated contact may cause allergic reactions in very susceptible persons.
Mutagenicity Flonicamid: Not genotoxic in laboratory studies.
Carcinogenicity Flonicamid: Suggestive evidence of carcinogenicity (mouse bronchioloalveolar tumors), but not sufficient to assess human carcinogenic potential.
Neurological effects Flonicamid: Not neurotoxic.
Reproductive toxicity Flonicamid: No toxicity to reproduction in animal studies.
Developmental toxicity Flonicamid: Not teratogenic in animal studies.
STOT - single exposure May cause damage to organs: See listed target organs below.
STOT - repeated exposure Not classified.
Target organ effects Flonicamid: Liver Kidney Hematopoietic system
Neurological effects Flonicamid: Not neurotoxic.
Aspiration hazard No information available.

Chemical name | ACGIH | IARC | NTP | OSHA
--- | --- | --- | --- | ---
Flonicamid 158062-67-0 |  | Group 2A |  |  

12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Flonicamid (158062-67-0)</th>
<th>Duration</th>
<th>Species</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Ingredient(s)</td>
<td>96 h LC50</td>
<td>Fish</td>
<td>&gt;100</td>
<td>mg/L</td>
</tr>
<tr>
<td>Flonicamid Technical</td>
<td>48 h EC50</td>
<td>Crustacea</td>
<td>&gt;100</td>
<td>mg/L</td>
</tr>
<tr>
<td></td>
<td>96 h EC50</td>
<td>Algae</td>
<td>&gt;100</td>
<td>mg/L</td>
</tr>
<tr>
<td></td>
<td>21 d NOEC</td>
<td>Fish</td>
<td>10</td>
<td>mg/L</td>
</tr>
<tr>
<td></td>
<td>21 d NOEC</td>
<td>Crustacea</td>
<td>3.1</td>
<td>mg/L</td>
</tr>
</tbody>
</table>

Persistence and degradability Flonicamid: Non-persistent. Does not readily hydrolyze. Readily biodegradable (meets the >70% reduction in ≤ 28 days).

Bioaccumulation Flonicamid: The substance does not have a potential for bioconcentration.

Mobility Flonicamid: Very mobile; has potential to reach groundwater.

13. DISPOSAL CONSIDERATIONS
Waste disposal methods
Can be incinerated, when in compliance with local regulations. The appropriate regulatory agencies should be contacted prior to disposal. Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance.

Contaminated Packaging
Dispose of in accordance with local regulations. Completely empty bag into application equipment. When completely empty, offer for recycling if available, or dispose of bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Do not reuse or refill this container.

14. TRANSPORT INFORMATION

DOT
This material is not a hazardous material as defined by U.S. Department of Transportation at 49 CFR Parts 100 through 185.

TDG
Not regulated in transportation

ICAO/IATA
Not regulated in transportation.

IMDG/IMO
Not regulated in transportation.

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>100 lb</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>100 lb</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>100 lb</td>
<td>100 lb</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>100 lb</td>
<td>45.4 kg</td>
</tr>
</tbody>
</table>

FIFRA Information
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling
CARBINE® 50 WG INSECTICIDE

requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

WARNING
Causes substantial, but temporary, eye injury. Harmful is swallowed or absorbed through the skin.

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by state right-to-know regulations

International Inventories

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Mexico - Pollutant Release and Transfer Register - Reporting Emissions for Fabrication, Process or Use -Threshold Quantities</th>
<th>Pollutant Release and Transfer Register - Reporting Emissions - Threshold Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>100 2500 kg/yr</td>
<td>100 kg/yr</td>
</tr>
</tbody>
</table>

WHMIS Statement
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class
Non-controlled

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical hazard</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Revision date: 2016-05-26
Reason for revision: (M)SDS sections updated

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