1. PRODUCT IDENTIFICATION

Product Name: BION 50WG
EPA Signal Word: Caution
Active Ingredient(%): Acibenzolar-S-Methyl (50.0%)
Chemical Name: 1,2,3-Benzothiadiazole-7-carbothioic acid S-methyl ester
Chemical Class: Plant Activator
EPA Registration Number(s): 100-922

2. HAZARDS IDENTIFICATION

Health and Environmental
Harmful if inhaled. May be harmful in contact with skin. Irritating to eyes and skin.
May form flammable dust-air mixture.

Hazardous Decomposition Products
Not Available

Physical Properties
Appearance: Light brown to dark brown granules
Odor: Moderate, sulfurous-like

Unusual Fire, Explosion and Reactivity Hazards
During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

See also Sec. 7.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Material</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other</th>
<th>NTP/IARC/OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica, Quartz and Cristobalite</td>
<td>10 mg/m³/(%SiO2+2) (respirable dust)</td>
<td>0.025 mg/m³ (respirable silica)</td>
<td>0.05 mg/m³ (respirable dust) **</td>
<td>IARC 1; ACGIH A2</td>
</tr>
<tr>
<td>Diatomaceous Earth</td>
<td>80 mg/m³ (%SiO2 (20 mppcf) TWA</td>
<td>Not Established</td>
<td>6 mg/m³ TWA **</td>
<td>IARC 3</td>
</tr>
<tr>
<td>Acibenzolar-S-Methyl (50.0%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>10 mg/m³ TWA ***</td>
<td>No</td>
</tr>
</tbody>
</table>

** recommended by NIOSH
*** Syngenta Occupational Exposure Limit (OEL)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
Syngenta Hazard Category: B, S

4. FIRST AID MEASURES

Product Name: BION 50WG
5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method): Not Applicable
Flammable Limits (% in Air): Lower: Not Applicable Upper: Not Applicable
Autoignition Temperature: Not Available
Flammability: Combustible powder

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

See also Sec. 7.

In Case of Fire

Use appropriate extinguishing media for combustibles in the area. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Avoid dust formation.

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions in Protective Equipment Section. Sweep up material and place in a compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment
should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse
if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

This material could become charged under certain conditions such as pneumatic conveying.

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages
or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a
potential for exposure to the material. Wash thoroughly with soap and water after handling.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR
THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

**Ingestion:** Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for
exposure to the material. Wash thoroughly with soap and water after handling.

**Eye Contact:** Where eye contact is likely, use just-proof chemical goggles. Facilities storing or utilizing this material
should be equipped with an eyewash facility and a safety shower.

**Skin Contact:** Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber,
neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and
chemical-resistant footwear.

**Inhalation:** A respirator is not normally required when handling this substance. Use effective engineering controls to
comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, or P or HE filter.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Light brown to dark brown granules</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Moderate, sulfurous-like</td>
</tr>
<tr>
<td><strong>Melting Point</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Boiling Point</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Specific Gravity/Density</strong></td>
<td>0.61 g/cm³</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>7 - 11 (1% in deionized water)</td>
</tr>
<tr>
<td><strong>Solubility in H2O</strong></td>
<td></td>
</tr>
<tr>
<td>Acibenzolar-S-Methyl:</td>
<td>7.7 mg/l @ 68°F (20°C)</td>
</tr>
<tr>
<td><strong>Vapor Pressure</strong></td>
<td></td>
</tr>
<tr>
<td>Acibenzolar-S-Methyl:</td>
<td>1.65 x 10(-6) mmHg @ 68°F (20°C)</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stability</strong></td>
<td>Stable under normal use and storage conditions.</td>
</tr>
<tr>
<td><strong>Hazardous Polymerization</strong></td>
<td>Will not occur.</td>
</tr>
<tr>
<td><strong>Conditions to Avoid</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Materials to Avoid</strong></td>
<td>Not Available</td>
</tr>
<tr>
<td><strong>Hazardous Decomposition Products</strong></td>
<td>Not Available</td>
</tr>
</tbody>
</table>

### 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity/Irritation Studies (Finished Product)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oral (LD50 Rat):</strong></td>
<td>&gt; 5000 mg/kg body weight</td>
</tr>
<tr>
<td><strong>Dermal (LD50 Rat):</strong></td>
<td>&gt; 2000 mg/kg body weight</td>
</tr>
</tbody>
</table>

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Product Name: **BION 50WG**
Inhalation: Inhalation (LC50 Rat) : > 2.79 mg/l air - 4 hours
Eye Contact: Irritating (Rabbit)
Skin Contact: Moderately Irritating (Rabbit)
Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects
Acibenzolar-S-Methyl: Developmental toxicity and fetal malformations at high maternal doses (rats).

Chronic/Subchronic Toxicity Studies
Acibenzolar-S-Methyl: Slight hemolytic anemia at highest dose level (rats, mice and dogs). Liver and spleen effects observed in highest dose level (rats and dogs).

Carcinogenicity
Acibenzolar-S-Methyl: Not carcinogenic at dietary levels up to 7500 ppm (rat) and 6000 ppm (mouse).

Ecotoxicity Effects
Fish (Rainbow Trout) 96-hour LC50 0.88 ppm
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 2.9 ppm
Green Algae 72-hour EC50 80.1 ppm
Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

Environmental Fate
Acibenzolar-S-Methyl:
The information presented here is for the active ingredient, acibenazolar-s-methyl. Low bioaccumulation potential. Not persistent in soil or water. Low mobility in soil. Sinks in water (after 24 h).
13. DISPOSAL CONSIDERATIONS

Disposal
Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable
Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification
Ground Transport - NAFTA
Not regulated.

Comments
Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Acibenzolar), Marine Pollutant
Hazard Class: Class 9
Identification Number: UN 3077
Packing Group: PG III

Air Transport
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Acibenzolar)
Hazard Class: Class 9
Identification Number: UN 3077
Packing Group: PG III

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification
Section 311/312 Hazard Classes: Acute Health Hazard
Section 313 Toxic Chemicals: Not Applicable

California Proposition 65
Not Applicable

CERCLA/SARA 304 Reportable Quantity (RQ)
None

RCRA Hazardous Waste Classification (40 CFR 261)
Not Applicable

TSCA Status
Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA Hazard Ratings</th>
<th>HMIS Hazard Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health: 2</td>
<td>Health: 1</td>
</tr>
<tr>
<td>Flammability: 1</td>
<td>Flammability: 1</td>
</tr>
<tr>
<td>Instability: 0</td>
<td>Reactivity: 0</td>
</tr>
</tbody>
</table>

For non-emergency questions about this product call:

1-800-334-9481

Product Name: BION 50WG
The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS