SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>ALLEGIANCE®-FL SEED TREATMENT FUNGICIDE</th>
</tr>
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<tbody>
<tr>
<td>MSDS Number</td>
<td>102000012827</td>
</tr>
<tr>
<td>EPA Registration No.</td>
<td>264-935</td>
</tr>
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</table>

Bayer CropScience
2 T.W. Alexander Drive
Research Triangle PK, NC 27709
USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-866-99BAYER (1-866-992-2937)

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview
Warning! Harmful if swallowed or absorbed through skin. Causes skin irritation. Moderate eye irritation. Do not get in eyes, on skin, or on clothing. Avoid inhalation of vapour or mist.

Physical State
liquid

Odor
musty

Appearance
light brown

Exposure routes
Skin Absorption, Skin contact, Eye contact, Ingestion, Inhalation

Immediate Effects
Eye
Moderate eye irritation. Do not get in eyes.

Skin
Causes skin irritation. Harmful if absorbed through skin. Do not get on skin or clothing.

Ingestion
Harmful if swallowed. Do not take internally.

Inhalation
Avoid inhalation of vapour or mist.

Chronic or Delayed
Long-Term
This product or its components may have target organ effects.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
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<tbody>
<tr>
<td>Metalaxyl</td>
<td>57837-19-1</td>
<td>28.35</td>
</tr>
<tr>
<td>Attapulgite clay</td>
<td>12174-11-7</td>
<td>0.40</td>
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</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye
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 eye. Call a physician or poison control center immediately.

Skin
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation
Move 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 physician or poison control center immediately.

Notes to physician
Treatment
Treat symptomatically. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Flash point
> 93.4 °C / > 200.1 °F

Fire and Explosion Hazards
In the event of fire the following may be released:
- nitrogen oxides (NOx)
- Carbon dioxide (CO2)
- Carbon monoxide (CO)

Suitable extinguishing media
Foam, Dry chemical, Carbon dioxide (CO2)
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice
Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling procedures
Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.

Storing Procedures
Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Min/Max Storage Temperatures
Recommended minimum transport/storage temperature: 0 °C / 32 °F
Recommended maximum transport/storage temperature: 35 °C / 95 °F

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection
Follow all label instructions. Train employees in safe use of the product.
Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

**Eye/Face Protection**
Tightly fitting safety goggles

**Hand protection**
Chemical resistant nitrile rubber gloves

**Body Protection**
Wear long-sleeved shirt and long pants and shoes plus socks.

**Respiratory protection**
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.

**Exposure Limits**

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<tr>
<th>Substance</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>US CA OEL</th>
<th>TX ESL</th>
<th>ST ESL</th>
<th>AN ESL</th>
<th>TWA</th>
<th>TWA PEL</th>
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<tbody>
<tr>
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<td>57837-19-1</td>
<td>TX ESL</td>
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<td>Kaolin</td>
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<tr>
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<td></td>
<td>NIOSH</td>
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<td></td>
<td>NIOSH</td>
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<tr>
<td></td>
<td></td>
<td>US CA OEL</td>
<td>TWA PEL</td>
<td>2 mg/m³</td>
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<tr>
<td></td>
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<td>TX ESL</td>
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<tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
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</table>

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance**
light brown

**Physical State**
liquid

**Odor**
musty

**pH**
5.0 - 8.0 (100 %)

**Density**
1.10 g/cm³ at 20 °C

**Water solubility**
miscible

**SECTION 10. STABILITY AND REACTIVITY**

**Conditions to avoid**
Extremes of temperature and direct sunlight.
Incompatibility

Strong acids
Strong bases
Oxidizing agents

Chemical Stability
Stable under recommended storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredient, metalaxyl.

Acute oral toxicity  
rat: LD50: > 2,900 mg/kg

Acute dermal toxicity  
rabbit: LD50: > 2,000 mg/kg

Acute inhalation toxicity  
rat: LC50: > 21.94 mg/l
Exposure time: 1 h
No deaths

Skin irritation  
Moderate skin irritation.

Eye irritation  
Moderate eye irritation.

Chronic toxicity  
Metalaxyl caused liver effects in chronic studies in mice, rats and/or dogs.

Assessment Carcinogenicity  
Metalaxyl was not carcinogenic in lifetime feeding studies in rats and mice.

ACGIH  
None.

NTP  
None.

IARC  
Attapulgite clay 12174-11-7 Overall evaluation: 2B
Attapulgite clay 12174-11-7 Overall evaluation: 3

OSHA  
None.

Reproductive toxicity  
REPRODUCTION: Metalaxyl did not cause reproductive toxicity in a multi-generation study in rats.

DEVELOPMENTAL TOXICITY: Metalaxyl is not considered a primary developmental toxicant in laboratory animals. Developmental effects were observed only at doses that caused maternal toxicity.

Neurotoxicity  
Metalaxyl neurotoxicity studies are not required at this time.

Mutagenicity  
Metalaxyl was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.
SECTION 12. ECOLOGICAL INFORMATION

Environmental precautions
Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor runoff or drift. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance
Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited.

Container Disposal
Do not re-use empty containers. Triple rinse containers. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

RCRA Information
Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user’s responsibility. RCRA classification may apply.

SECTION 14. TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

Freight Classification: INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15. REGULATORY INFORMATION

EPA Registration No.
264-935

US Federal Regulations
TSCA list
None.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.

SARA Title III - Section 302 - Notification and Information
None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting

None.

US States Regulatory Reporting
CA Prop65
This product contains a chemical known to the State of California to cause cancer.
Attapulgite clay 12174-11-7

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients
Attapulgite clay 12174-11-7 CA

Canadian Regulations
Canadian Domestic Substance List
None.

Environmental
CERCLA
None.
Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health - 2  Flammability - 1  Reactivity - 0  Others - none


Health - 1  Flammability - 1  Physical Hazard - 0  PPE -

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

Reason for Revision: Updated for general editorial purposes. The following sections have been revised:
Section 16: Other Information.

Revision Date: 09/02/2010

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