



MATERIAL SAFETY DATA SHEET

ALLEGIANCE ® DRY

Version: 1.2
Date of Issue: 07/25/2007
Date printed: 10/17/2007

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : ALLEGIANCE ® DRY

Chemical name: Metalaxyl (Active)

Use of substance/preparation: Seed Treatment Fungicide

Supplier: Chemtura Corporation
199 Benson Road
Middlebury, CT 06749 USA

Emergency telephone number: CHEMTREC (24 hours) 800-424-9300, 703-527-3887
Chemtura Corporation Emergency Response (24 hours) 800-292-5898

Environmental, Health and Safety Department: 866-430-2775

Prepared by Product Safety Department Date of Issue: 07/25/2007
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(EU) +44 (0) 1753.603.000
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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
CAUTION!
MAY CAUSE EYE AND SKIN IRRITATION.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| INGREDIENT | % BY WEIGHT |
|------------------------------|---------------|
| Graphite CAS# 7782-42-5 | >= 10 - <= 20 |
| Metalaxyl CAS# 57837-19-1 | 12.5 |
| Mineral Oil Mist CAS# - | < 5 |



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4. FIRST AID MEASURES

Swallowing

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.

Skin contact

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

Eye contact

Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lens, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Notes to physician

ROUTES OF ENTRY:

Inhalation

Skin

Eyes

Ingestion

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Autoignition temperature:

Not available

NFPA CLASSIFICATION

| | | | |
|-----------|-----------------|---------------|---------------------|
| Health: 1 | Flammability: 1 | Reactivity: 0 | Special provisions: |
|-----------|-----------------|---------------|---------------------|

Hazardous combustion products

Irritating fumes.

Oxides of carbon.

Oxides of nitrogen.

Special fire fighting procedures

Do not discharge extinguishing waters into streams, rivers and lakes.

Special protective equipment for firefighters

Body covering protective clothing, full "turn-out" gear.

Self-contained breathing apparatus.

Extinguishing media

Suitable: - CO2
- dry powder
- foam
- water fog

Unsuitable: - water spray

Unusual fire and explosion hazards

Following products may be produced during a fire:., Oxides of nitrogen., Oxides of carbon., Irritating fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear suitable protective equipment., Avoid contact with eyes and skin.



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Environmental precautions

Prevent from entering sewer system, surface water or soil.

Methods for cleaning up

Sweep up and collect in a suitable container for disposal.
Avoid dust formation.

7. HANDLING AND STORAGE

HANDLING

Handling precautions

Do not get in eyes, on skin, on clothing.

Other precautions

NOTE TO END-USERS: The employee protection recommendations on this MSDS may differ from those on the product label. For normal use of this product, always refer to the personal protective equipment requirements on the product label.

STORAGE

Storage requirements

Store in a cool, dry place.

Further information on storage

Do not store near food, feed or fertilizers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

| <u>Component</u> | <u>Country</u> | <u>Type</u> | <u>Value</u> | <u>Remark</u> |
|------------------|----------------|--------------------|----------------------|---|
| Graphite | USA | TLV-TWA, ACGIH | 2 mg/m ³ | respirable fraction, all forms except graphite fibers |
| Mineral Oil Mist | USA | TWA (mist), ACGIH | 5 mg/m ³ | If used in way that generates a "mist" observe the limits for Mineral Oil Mist. |
| Mineral Oil Mist | USA | STEL (mist), ACGIH | 10 mg/m ³ | |

PERSONAL PROTECTION

Respiratory protection

A respirator approved for dust/fume or mist protection is recommended for mists, sprays or aerosols. The determination of appropriate respiratory protection is best performed, on a case by case basis, taking into consideration the exposure conditions of the particular operation.

Hand protection / protective gloves

Chemical resistant protective gloves

Eye protection

Safety glasses with side shields.

Skin protection

Wear protective clothing, such as long sleeves to minimize skin contact.

ENGINEERING CONTROLS

Ventilation

If personnel exposure exceeds exposure limits, apply local exhaust ventilation at points of dust generation.



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9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Physical state Powder
Color Gray
Odor Musty
Odor threshold Not available

OTHER PROPERTIES

Melting point Not available
pH Not available
Bulk density 25 - 31 lb/ft³
Vapor pressure
Solubility in water Insoluble
Flash point Not available
Autoignition temperature Not available

10. STABILITY AND REACTIVITY

Stability: This product is stable under normal storage and handling conditions.

Incompatible materials:

Oxidizing agents.
Strong acids.
Strong bases.

Hazardous combustion products:

Irritating fumes.
Oxides of carbon.
Oxides of nitrogen.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

SWALLOWING

Test results

Acute toxicity: LD50 Rat (Males)
Result: > 5,000 mg/kg

Acute toxicity: LD50 Rat (Females)
Result: 2,000 - 5,000 mg/kg

SKIN ABSORPTION

Test results

Acute toxicity: LD50
Result: > 2,000 mg/kg

INHALATION



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Test results
Acute toxicity: LC50
Result: > 2.53 mg/l
Exposure time: 4 h

SKIN CONTACT
Test results
Skin irritation: Result: Slight irritation

EYE CONTACT
Test results
Eye irritation: Result: Slight irritation

SENSITIZATION
Test results: Species: - Guinea pigs
Result: Non sensitizing.
Method: Bühler-Test

12. ECOLOGICAL INFORMATION

Toxic to aquatic organisms.

| | |
|--|---|
| <u>Component ecotoxicology</u> Metalaxyl <u>Acute toxicity fish:</u> | LC50 - Rainbow trout (Oncorhynchus mykiss) Result: > 100 mg/l Exposure time: 96 h |
| <u>Component ecotoxicology</u> Metalaxyl <u>Aquatic toxicity to plants:</u> | IC50 - Green algae (Scenedesmus subspicatus) Result: 33 mg/l Exposure time: 5 d |
| <u>Component ecotoxicology</u> Metalaxyl <u>Acute toxicity to aquatic invertebrates:</u> | EC50 - Result: > 28 mg/l Exposure time: 48 h |

13. DISPOSAL CONSIDERATIONS

General: Dispose of in accordance with appropriate Federal, State, and local regulations., Avoid discharge to sewers and natural waters.

US waste
In accordance with EPA/RCRA regulations 40 CFR261.33 (f) U244

14. TRANSPORT INFORMATION

DOT Classification

This product is not regulated by DOT.

IMDG Classification

This product is not regulated by IMDG.

ICAO Classification

This product is not regulated by ICAO.



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15. REGULATORY INFORMATION

Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQ's) in 40CFR302.4.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQ's) and release reporting based on Reportable Quantities (RQ's) in 40CFR355 (used for SARA 302 and 304).

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40CFR372 (for SARA 313). This information must be included in MSDS's that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

**** NONE ****

New Jersey Worker and Community Right-To-Know Act (Labeling Requirements)

| Chemical name | CAS# | New Jersey TS Number |
|-------------------|------------|----------------------|
| Silica, amorphous | 63231-67-4 | |
| Graphite | 7782-42-5 | |
| Metalaxyl | 57837-19-1 | |
| Mineral Oil Mist | - | |

California Proposition 65

**** NONE ****

16. OTHER INFORMATION

RECOMMENDED USES AND RESTRICTIONS: NOTE TO END-USERS: This MSDS is being provided to all interested persons in accordance with federal and state right-to-know laws. Precautionary Statements, First Aid Statements and Directions for Use of this product by end-users are contained on the product label and must be followed at all times.

HMIS RATING

| | | | |
|-----------|-----------------|---------------|--------|
| Health: 1 | Flammability: 1 | Reactivity: 0 | PPI: X |
|-----------|-----------------|---------------|--------|

| | |
|----------|---|
| STP | Standard temperature and pressure |
| W/W | Weight/Weight 0 (HMIS) |
| 1 (HMIS) | Slight hazard |
| 2 (HMIS) | Moderate hazard |
| 3 (HMIS) | Serious hazard |
| 4 (HMIS) | Severe hazard |
| X (HMIS) | Personal protection rating to be supplied by user depending on use conditions |

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THE OPINIONS EXPRESSED HEREIN ARE THOSE OF QUALIFIED EXPERTS WITHIN CHEMTURA CORPORATION. WE BELIEVE THAT THE INFORMATION CONTAINED HEREIN IS CURRENT AS OF THE DATE OF THIS SAFETY DATA SHEET. SINCE THE USE OF THIS INFORMATION AND OF THESE OPINIONS AND THE CONDITIONS OF USE OF THIS PRODUCT ARE NOT WITHIN THE CONTROL OF CHEMTURA CORPORATION, IT IS THE USER'S OBLIGATION TO DETERMINE THE CONDITIONS OF SAFE USE OF THE PRODUCTS.