

Product Name: GRAZON* P+D Herbicide

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Dow AgroSciences LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name

GRAZON* P+D Herbicide

COMPANY IDENTIFICATION

Dow AgroSciences LLC
A Subsidiary of The Dow Chemical Company
9330 Zionsville Road
Indianapolis, IN 46268-1189
USA

Customer Information Number:

800-992-5994

SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact:

800-992-5994

Local Emergency Contact:

352-323-3500

2. Hazards Identification

Emergency Overview

Color: Yellow to brown

Physical State: Liquid.

Odor: Alcohol.

Hazards of product:

WARNING! May cause allergic skin reaction. May cause eye irritation. May be harmful if inhaled. Isolate area. Keep upwind of spill. Toxic fumes may be released in fire situations.

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Health Effects

Eye Contact: May cause moderate eye irritation. May cause slight corneal injury. Effects may be slow to heal.

Skin Contact: Brief contact is essentially nonirritating to skin. Prolonged contact may cause slight skin irritation with local redness. Repeated contact may cause slight skin irritation with local redness.

Skin Absorption: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Skin Sensitization: Based largely or completely on information for similar material(s). Has caused allergic skin reactions when tested in guinea pigs.

Inhalation: Prolonged excessive exposure may cause adverse effects. Based on the available data, respiratory irritation was not observed.

Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

Aspiration hazard: Based on physical properties, not likely to be an aspiration hazard.

Effects of Repeated Exposure: For the active ingredient(s): In animals, effects have been reported on the following organs: Kidney. Liver. Eye. Thyroid. Observations in animals include: Nausea and/or vomiting.

Birth Defects/Developmental Effects: For the active ingredient(s): 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt Has caused birth defects in lab animals only at doses producing severe toxicity in the mother. For the minor component(s): Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Reproductive Effects: For similar active ingredient(s). 2,4-Dichlorophenoxyacetic acid. In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring.

3. Composition Information

| Component | CAS # | Amount |
|--|---------------|--------|
| 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt | 18584-79-7 | 39.6 % |
| Picloram triisopropanolamine salt | 6753-47-5 | 10.2 % |
| Alkylphenol alkoxylate | 69029-39-6 | 5.1 % |
| Isopropanol | 67-63-0 | 1.6 % |
| Triisopropanolamine | 122-20-3 | 1.0 % |
| Balance | Not available | 42.5 % |

4. First-aid measures

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

Skin Contact: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

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 eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be available in work area.

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 the poison control center or doctor. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. Fire Fighting Measures

Suitable extinguishing media

To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Phosgene.

Unusual Fire and Explosion Hazards: This material will not burn until the water has evaporated. Residue can burn.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Ventilate area of leak or spill. Keep upwind of spill. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling, for additional precautionary measures.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling

General Handling: Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly after handling. Keep container closed.

Storage

Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

8. Exposure Controls / Personal Protection

Exposure Limits

| Component | List | Type | Value |
|--------------------------------------|----------------|------|-------------------------------|
| Alkylphenol alkoxyate Isopropanol | Dow IHG | TWA | 2 mg/m ³ |
| | OSHA Table Z-1 | PEL | 980 mg/m ³ 400 ppm |
| | ACGIH | TWA | 200 ppm BEI |
| | ACGIH | STEL | 400 ppm BEI |
| Triisopropanolamine | Dow IHG | TWA | 10 mg/m ³ |

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Personal Protection

Eye/Face Protection: Use chemical goggles.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

9. Physical and Chemical Properties

Appearance**Physical State**

Liquid.

Color

Yellow to brown

Odor

Alcohol.

pH6.8 - 7.8 pH *Electrode***Melting Point**

Not applicable

Freezing Point

No test data available

Boiling Point (760 mmHg)

82 °C (180 °F) .

Flash Point - Closed Cup> 100 °C (> 212 °F) *Setaflash Closed Cup ASTMD3828*

| | |
|---|---|
| Evaporation Rate (Butyl Acetate = 1) | No test data available |
| Flammable Limits In Air | Lower: No test data available Upper: No test data available |
| Vapor Pressure | 32 hPa @ 20 °C |
| Vapor Density (air = 1) | Not applicable |
| Specific Gravity (H₂O = 1) | 1.143 <i>Literature</i> |
| Solubility in water (by weight) | Soluble |
| Partition coefficient, n-octanol/water (log Pow) | No data available for this product. See Section 12 for individual component data. |
| Autoignition Temperature | No test data available |
| Decomposition Temperature | No test data available |
| Dynamic Viscosity | No test data available |
| Kinematic Viscosity | No test data available |
| Liquid Density | 1.149 g/cm ³ @ 20 °C |

10. Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical stability

Thermally stable at typical use temperatures.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to Avoid: Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

Decomposition products can include and are not limited to: Hydrogen chloride. Nitrogen oxides.

Toxic gases are released during decomposition. Decomposition products can include trace amounts of: Phosgene.

11. Toxicological Information

Acute Toxicity

Ingestion

Single dose oral LD₅₀ has not been determined. Based on information for a similar material: LD₅₀, rat > 2,000 mg/kg

Dermal

The dermal LD₅₀ has not been determined. Based on information for a similar material: LD₅₀, rabbit > 2,000 mg/kg

Inhalation

The LC₅₀ has not been determined. Based on information for a similar material: LC₅₀, rat > 1.00 mg/l

Eye damage/eye irritation

May cause moderate eye irritation. May cause slight corneal injury. Effects may be slow to heal.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin. Prolonged contact may cause slight skin irritation with local redness. Repeated contact may cause slight skin irritation with local redness.

Sensitization

Skin

Based largely or completely on information for similar material(s). Has caused allergic skin reactions when tested in guinea pigs.

Respiratory

No relevant data found.

Repeated Dose Toxicity

For the active ingredient(s): In animals, effects have been reported on the following organs: Kidney. Liver. Eye. Thyroid. Observations in animals include: Nausea and/or vomiting.

Chronic Toxicity and Carcinogenicity

For similar active ingredient(s). Various animal cancer tests have shown no reliably positive association between 2,4-D exposure and cancer. Epidemiology studies on herbicide use have been both positive and negative with the majority being negative. For similar active ingredient(s). Picloram acid. Did not cause cancer in laboratory animals.

Developmental Toxicity

For the active ingredient(s): 2,4-Dichlorophenoxyacetic acid, Triisopropanolamine salt Has caused birth defects in lab animals only at doses producing severe toxicity in the mother. For the minor component(s): Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Reproductive Toxicity

For similar active ingredient(s). 2,4-Dichlorophenoxyacetic acid. In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring.

Genetic Toxicology

For the component(s) tested: In vitro genetic toxicity studies were negative. For the majority of components: Animal genetic toxicity studies were negative.

12. Ecological Information

Toxicity

Data for Component: **2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested). Material is moderately toxic to birds on an acute basis (LD50 between 51 and 500 mg/kg). Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

Fish Acute & Prolonged Toxicity

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 h: 317 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, Daphnia magna (Water flea), static test, 48 h, survival: 748 mg/l

Aquatic Plant Toxicity

EbC50, Skeletonema costatum, biomass growth inhibition, 5 d: 82.4 mg/l

Toxicity to Above Ground Organisms

oral LD50, Colinus virginianus (Bobwhite quail): 405 mg/kg

dietary LC50, Colinus virginianus (Bobwhite quail): > 5,620 ppm

Data for Component: **Picloram triisopropanolamine salt**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 h: 25 - 1,250 mg/l

LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 h: 109 mg/l

LC50, Pimephales promelas (fathead minnow), static test, 96 h: 150 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, Daphnia magna (Water flea), static test, 48 h, survival: 125 mg/l

Data for Component: **Alkylphenol alkoxyate**

|| Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

|| LC50, Lepomis macrochirus (Bluegill sunfish), static test, 96 h: 4.8 mg/l

|| LC50, Oncorhynchus mykiss (rainbow trout), static test, 96 h: 3.7 mg/l

Aquatic Invertebrate Acute Toxicity

|| LC50, Daphnia magna (Water flea), 48 h: 10.5 mg/l

Toxicity to Above Ground Organisms

|| dietary LC50, Apis mellifera (bees): > 105 micrograms/bee

|| contact LD50, Apis mellifera (bees): > 100 micrograms/bee

|| No Observed Effects Level (NOEL), Colinus virginianus (Bobwhite quail): 2,250 mg/kg

|| oral LD50, Colinus virginianus (Bobwhite quail): > 2,250 mg/kg

Data for Component: **Isopropanol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Pimephales promelas (fathead minnow), flow-through test, 96 h: 9,640 mg/l

Aquatic Invertebrate Acute Toxicity

LC50, Daphnia magna (Water flea), static test, 24 h, immobilization: > 1,000 mg/l

Aquatic Plant Toxicity

NOEC, alga Scenedesmus sp., static test, Growth inhibition (cell density reduction), 7 d: 1,800 mg/l

ErC50, alga Scenedesmus sp., static test, Growth rate inhibition, 72 h: > 1,000 mg/l

Toxicity to Micro-organisms

EC50; activated sludge: > 1,000 mg/l

Aquatic Invertebrates Chronic Toxicity Value

water flea Daphnia magna, semi-static test, 21 d, NOEC: 30 mg/l

Data for Component: **Triisopropanolamine**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, Leuciscus idus (Golden orfe), static test, 96 h: 3,158.4 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: > 500 mg/l

Aquatic Plant Toxicity

EC50, alga Scenedesmus sp., static test, Growth rate inhibition, 72 h: 710 mg/l

Toxicity to Micro-organisms

EC10; activated sludge, 30 min: > 1,195 mg/l

Persistence and Degradability

Data for Component: **2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**

Material is expected to be readily biodegradable. Biodegradation rate may increase in soil and/or water with acclimation.

Data for Component: **Picloram triisopropanolamine salt**

For similar active ingredient(s). Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Biodegradation may occur under aerobic conditions (in the presence of oxygen). Surface photodegradation is expected with exposure to sunlight.

Data for Component: **Alkylphenol alkoxyolate**

Biodegradation under aerobic laboratory conditions is below detectable limits (BOD20 or BOD28/ThOD < 2.5%).

Chemical Oxygen Demand: 1.78 mg/mg

Theoretical Oxygen Demand: 2.35 mg/mg

Data for Component: **Isopropanol**

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

| Biodegradation | Exposure Time | Method | 10 Day Window |
|----------------|---------------|----------------|---------------|
| 95 % | 21 d | OECD 301E Test | pass |

| | | | |
|------|-----|--|------|
| 53 % | 5 d | EU Method C.6 (Degradation: Chemical Oxygen Demand) | pass |
|------|-----|--|------|

Indirect Photodegradation with OH Radicals

| Rate Constant | Atmospheric Half-life | Method |
|-----------------------------|-----------------------|------------|
| 7.26E-12 cm ³ /s | 1.472 d | Estimated. |

Biological oxygen demand (BOD):

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|-----------|--------|-----------|--------|
| 20 - 72 % | | 78 - 86 % | |

Chemical Oxygen Demand: 2.09 mg/mg

Theoretical Oxygen Demand: 2.40 mg/mg

Data for Component: **Triisopropanolamine**

Biodegradation under aerobic static laboratory conditions is high (BOD₂₀ or BOD₂₈/ThOD > 40%). Biodegradation rate may increase in soil and/or water with acclimation. Material is not readily biodegradable according to OECD/EEC guidelines.

OECD Biodegradation Tests:

| Biodegradation | Exposure Time | Method | 10 Day Window |
|----------------|---------------|----------------|---------------|
| 0 % | 28 d | OECD 301F Test | fail |

Indirect Photodegradation with OH Radicals

| Rate Constant | Atmospheric Half-life | Method |
|----------------------------|-----------------------|------------|
| 1.2E-10 cm ³ /s | 3 h | Estimated. |

Biological oxygen demand (BOD):

| BOD 5 | BOD 10 | BOD 20 | BOD 28 |
|-------|--------|--------|--------|
| 47 % | 70 % | | |

Theoretical Oxygen Demand: 2.35 mg/mg

Bioaccumulative potentialData for Component: **2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**Data for Component: **Picloram triisopropanolamine salt**

Bioaccumulation: For similar active ingredient(s). Picloram. Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Data for Component: **Alkylphenol alkoxyate**

Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility. May foam in water.

Data for Component: **Isopropanol**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 0.05 Measured

Data for Component: **Triisopropanolamine**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): -0.015 Measured

Bioconcentration Factor (BCF): < 0.57; Fish; Measured

Mobility in soilData for Component: **2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt**Data for Component: **Picloram triisopropanolamine salt**

Mobility in soil: For similar active ingredient(s)., Picloram., Potential for mobility in soil is very high (Koc between 0 and 50).

Data for Component: **Alkylphenol alkoxyate**

Mobility in soil: No data available.

Data for Component: **Isopropanol**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 1.1 Estimated.

Henry's Law Constant (H): 3.38E-06 - 8.07E-06 atm*m³/mole; 25 °C Estimated.

Data for Component: **Triisopropanolamine**

Mobility in soil: Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (K_{oc}): 10 Estimated.
Henry's Law Constant (H): 1E-06 Pa m³/mol; 25 °C Estimated.

13. Disposal Considerations

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. Transport Information

DOT Non-Bulk

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Technical Name: 2,4-D Salts

Hazard Class: 9 ID Number: UN3082 Packing Group: PG III

DOT Bulk

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Technical Name: 2,4-D Salts

Hazard Class: 9 ID Number: UN3082 Packing Group: PG III

IMDG

NOT REGULATED

ICAO/IATA

NOT REGULATED

CONTAINER QUANTITIES LESS THAN THE REPORTABLE QUANTITY ARE NON-HAZARDOUS BY DOT

Additional Information

Reportable quantity: 253 lb – 2,4-D SALTS

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

| | |
|-----------------------------------|-----|
| Immediate (Acute) Health Hazard | Yes |
| Delayed (Chronic) Health Hazard | Yes |
| Fire Hazard | No |
| Reactive Hazard | No |
| Sudden Release of Pressure Hazard | No |

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

US. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

| |
|------------------------------|
| 16. Other Information |
|------------------------------|

Hazard Rating System

| NFPA | Health | Fire | Reactivity |
|------|--------|------|------------|
| | 1 | 1 | 0 |

Revision

Identification Number: 1012442 / 1016 / Issue Date 11/17/2011 / Version: 2.0

DAS Code: GF-2179

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

| | |
|--------------|---|
| N/A | Not available |
| W/W | Weight/Weight |
| OEL | Occupational Exposure Limit |
| STEL | Short Term Exposure Limit |
| TWA | Time Weighted Average |
| ACGIH | American Conference of Governmental Industrial Hygienists, Inc. |
| DOW IHG | Dow Industrial Hygiene Guideline |
| WEEL | Workplace Environmental Exposure Level |
| HAZ_DES | Hazard Designation |
| Action Level | A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded. |

Dow AgroSciences LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ

between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.