

MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994
Dow AgroSciences LLC
Indianapolis, IN 46268

DIMENSION* ULTRA 40 WP SPECIALTY HERBICIDE

Effective Date: 14-Dec-06
Product Code: 88829
MSDS: 007735

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Dimension* Ultra 40 WP Specialty Herbicide

COMPANY IDENTIFICATION:

Dow AgroSciences, LLC
9330 Zionsville Road
Indianapolis, IN 46268-1189

2. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

White to tan solid with a sulfur-like odor. May cause eye irritation with corneal injury. May cause skin irritation. Toxic to aquatic organisms.

EMERGENCY PHONE NUMBER: 800-992-5994

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Component	CAS Number	W/W%
Dithiopyr	97886-45-8	40.0
Porcelain Clay	1332-58-7	1.4 – 37.6
Titanium Dioxide	13463-67-7	1.0
Quartz	14808-60-7	0.4
Toluene	108-88-3	0.3
Balance		20.8 – 57.0

4. FIRST AID:

EYE: Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

SKIN: Wash skin with plenty of water.

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.

INHALATION: Move person to fresh air; if effects occur, consult a physician.

NOTE TO PHYSICIAN: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES:

FLASH POINT: Not applicable

FLAMMABLE LIMITS

LFL: Not determined
UFL: Not determined

EXTINGUISHING MEDIA: Use the following extinguishing media when fighting fires involving this material: carbon dioxide, dry chemical, water spray or foam.

UNUSUAL HAZARDS: Pesticide particulates can become airborne. Dusts at sufficient concentrations can form explosive mixtures with air.

FIREFIGHTING EQUIPMENT: Wear self-contained breathing apparatus (pressure demand NIOSH approved or equivalent) and full protective gear.

SPECIAL PROCEDURES: Contain run-off. Remain upwind. Avoid breathing smoke. Use water spray to cool containers exposed to fire.

6. ACCIDENTAL RELEASE MEASURES:

ACTION TO TAKE FOR SPILLS/LEAKS: Keep spectators away. Avoid breathing dust. Sweep up small spills and place in suitable container for recovery or disposal. Keep dust to a minimum. Keep out of sewers and open bodies of water. Report large spills to Dow AgroSciences at 800-992-5994.

Wear appropriate protective equipment when handling a spill of this material. If exposed to material during clean-up operations, remove all contaminated clothing promptly. Wash all exposed skin areas with soap and water immediately after exposure. Thoroughly launder clothing before reuse. Do not take clothing home to be laundered.

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7. HANDLING AND STORAGE:

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

HANDLING: Do not handle material near food, feed or drinking water. Avoid high concentrations of dust in air and accumulation of dust on equipment. An airborne dust of this material can create a dust explosion. When handling and processing this material local exhaust ventilation may be required to control dust and reduce exposure to vapors. To prevent dust explosions employ bonding and grounding for operations capable of generating static electricity. Protect all equipment from explosions by following the guidelines in NFPA-68 and NFPA-69. For electrical equipment follow local codes and electrical classification NFPA-70 (the National Electrical Code), class II, division 2, group G.

STORAGE: Do not store this material near food, feed or drinking water. Avoid temperature extremes during storage. Ambient temperature is preferred. Keep container tightly closed when not in use.

OTHER: Completely empty bag into application equipment. Dispose empty bag in a sanitary landfill as allowed by state and local authorities.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

EXPOSURE GUIDELINE:

Dithiopyr: Dow AgroSciences Industrial Hygiene Guide is 0.25 mg/M³ TWA and 0.75 mg/M³ STEL.
Crystalline silica, Quartz: ACGIH TLV is 0.1 mg/M³ (respirable) for tripoli, and fused silica, 0.05 mg/M³ (respirable) for cristobalite, tridymite, and quartz. Quartz has an A2 designation. OSHA PEL is (30 mg/M³)/(%SiO₂+2) total dust, (250 mppcf)/(%SiO₂+5) or (10 mg/M³)/(%SiO₂+2) respirable for quartz, tripoli, and fused silica; the value for cristobalite and tridymite is 1/2 the value calculated from the respirable dust formula for quartz.
Titanium dioxide: ACGIH TLV is 10 mg/M³, A4. OSHA PEL is 15 mg/M³ total, 5 mg/M³ respirable.
Porcelain Clay: ACGIH TLV is 2 mg/M³, A4 OSHA PEL is 5 mg/M³ (respirable) and 15 mg/M³ (total dust).
Toluene: ACGIH TLV is 20 ppm, A4. OSHA PEL is 200 ppm TWA and 300 ppm Ceiling.

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION: Use gloves chemically resistant to this material.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. If respiratory irritation is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: particulate filter.

APPLICATORS AND ALL OTHER HANDLERS: Refer to the product label for personal protective clothing and equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES:

COLOR: White to tan

STATE: Solid

ODOR: Sulfur-like

pH: 6.0 to 7.0 (aqueous solution)

VISCOSITY: Not applicable

SPECIFIC GRAVITY (Water = 1): 0.20 to 0.30 g/cc (bulk density)

VAPOR DENSITY (Air = 1): Not applicable

VAPOR PRESSURE: Negligible

MELTING POINT: 131° F (55° C)

BOILING POINT: Not applicable

SOLUBILITY IN WATER: Dispersible

EVAPORATION RATE (Bac = 1): Not applicable

10. STABILITY AND REACTIVITY:

STABILITY: This material is stable under normal storage conditions. Avoid contact with ignition sources (e.g. sparks, open flame, and heated sources).

INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

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HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Not known to occur.

11. TOXICOLOGICAL INFORMATION:

POTENTIAL HEALTH EFFECTS: This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

EYE: May cause moderate eye irritation. May cause slight corneal injury.

SKIN: Brief contact may cause slight skin irritation with local redness. Did not cause allergic skin reactions when tested in guinea pigs. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD₅₀ for skin absorption in rats is >5,000 mg/kg.

INGESTION: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. The oral LD₅₀ for rats is >5,000 mg/kg.

INHALATION: At room temperature, exposure to vapor is minimal due to low volatility. Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs. The aerosol LC₅₀ for rats is >5.7 mg/L for 4 hours.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For dithiopyr, in animals, effects have been reported on the following organs: liver, kidney, adrenal gland, thyroid, gall bladder, and blood.

CANCER INFORMATION: Dithiopyr did not cause cancer in laboratory animals. Crystalline silica (Quartz) has been shown to cause cancer in laboratory animals and humans.

TERATOLOGY (BIRTH DEFECTS): Dithiopyr did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

REPRODUCTIVE EFFECTS: In animal studies, dithiopyr did not interfere with reproduction.

MUTAGENICITY: For dithiopyr, in-vitro genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

No relevant information found.

DEGRADATION & PERSISTENCE:

No relevant information found.

ECOTOXICOLOGY:

Based largely or completely on information for dithiopyr.

Material is highly toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ is between 0.1 and 1 mg/L in the most sensitive species tested).

Material is practically non-toxic to birds on a dietary basis (LC₅₀ is >5,000 ppm).

Material is practically non-toxic to birds on an acute basis (LD₅₀ is >2,000 mg/kg).

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: 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 and regulations.

14. TRANSPORT INFORMATION:

U.S. DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION:

For all shipments by air, rail or road:
This material is not regulated for transport.

For all shipments by vessel:
UN3082/ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, LIQUID, N.O.S. (DITHIOPYR)/9/P3
MARINE POLLUTANT (DITHIOPYR)

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15. REGULATORY INFORMATION:

NOTICE: The information herein is presented 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 from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
Toluene	000108-88-3	0.3%

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard
A delayed health hazard

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

This product contains chemical(s) known to the State of California to cause cancer and/or be a developmental toxin.

The chemicals are:

Toluene (CAS # 000108-88-3) – developmental toxin
Crystalline Silica, Quartz (CAS # 014808-60-7) - cancer

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
Porcelain Clay	1332-58-7	NJ1 NJ3 PA1
Crystalline Silica – Quartz	14808-60-7	NJ3 PA1
Titanium Dioxide	13463-67-7	NJ3 PA1
Toluene	108-88-3	NJ1 NJ2 NJ3 PA1

NJ1=New Jersey Special Health Hazard Substance (present at > or = to 0.1%).

NJ2=New Jersey Environmental Hazardous Substance (present at > or = to 1.0%).

NJ3=New Jersey Workplace Hazardous Substance (present at > or = to 1.0%).

PA1=Pennsylvania Hazardous Substance (present at > or = to 1.0%).

PA3=Pennsylvania Environmental Hazardous Substance (present at > or = to 1.0%).

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

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health	1
Flammability	0
Reactivity	0

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND): This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA, which may require reporting of releases:

Chemical Name	CAS Number	RQ	% in Product
Toluene	000108-88-3	1,000 lbs.	0.3%

RCRA Categorization:

USEPA Hazardous Waste #:
U220 = Toluene (CAS # 000108-88-3)

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16. OTHER INFORMATION:

MSDS STATUS: Revised Sections: 2,3,4,8,11,12,13,14,15
Reference: DR-0387-6582
Document Code: D03-164-002
Replaces Document Code: D03-164-001
Replaces MSDS Dated: 13-Dec-06

The Information Herein Is Given In Good Faith, But No
Warranty, Express or Implied, Is Made. Consult Dow
AgroSciences for Further Information.