

MATERIAL SAFETY DATA SHEET



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

DIMENSION* ULTRA 2SC HERBICIDE

Effective Date: 8-2-04
Product Code: 40750
MSDS: 007751

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Dimension* Ultra 2SC Herbicide

COMPANY IDENTIFICATION:

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

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Dithiopyr:	CAS # 097886-45-8	22.44%
S,S'-dimethyl 2-(difluoromethyl-4-(2-methylpropyl)-6-(trifluoromethyl)-3,5-pyridinedicarbothioate		
Balance, Total, including		77.56%
Propylene glycol	CAS # 000057-55-6	
Aromatic solvent	CAS # 064742-94-5	
(contains Naphthalene	CAS # 000091-20-3)	
Methyl Methacrylate	CAS # 000080-62-6	

3. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Off-white to tan liquid with an aromatic odor. May cause eye and/or skin irritation. Toxic to aquatic organisms.

EMERGENCY PHONE NUMBER: 800-992-5994

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: Take off contaminated clothing. Rinse skin immediately with 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.

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: 200°F (>93°C) (estimate)

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. Dried product can burn. Closed containers may rupture via pressure build-up when exposed to fire or extreme heat.

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: Floor may be slippery; use care to avoid falling. Contain small spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate containers for recovery or disposal. Avoid breathing vapor. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

Wear appropriate protective equipment when handling a spill of this material. If exposed to material during clean-up operations see Section 4 for actions to follow. 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.

STORAGE: Do not store this material near food, feed or drinking water. Avoid temperature extremes during storage; ambient temperature preferred. Keep container tightly closed when not in use. Store in a well-ventilated area. Store away from excessive heat (e.g. steam pipes, radiators), from sources of ignition and from reactive materials.

OTHER: Triple rinse (or equivalent) and puncture empty container. Dispose empty container in a sanitary landfill or 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.

Propylene Glycol: AIHA WEEL is 10 mg/M³ vapor and aerosol.

Aromatic Petroleum Solvent: None established. Supplier recommends a guideline of 100 ppm for the total product, which is a mixture of aromatic hydrocarbons.

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 safety glasses.

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 a NIOSH approved air-purifying respirator. In dusty or misty atmospheres, use a NIOSH approved particulate respirator.

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

9. PHYSICAL AND CHEMICAL PROPERTIES:

COLOR: Off-white to tan

STATE: Liquid

ODOR: Aromatic

pH: 4.6

VISCOSITY: 350 CPS

SPECIFIC GRAVITY (Water = 1): 1.085

VAPOR DENSITY (Air = 1): <1 (water)

VAPOR PRESSURE: 17 mmHg @ 68°F (20°C) (water)

MELTING POINT: 32°F (0°C) (water)

BOILING POINT: 212°F (100°C) (water)

SOLUBILITY IN WATER: Dispersible

PERCENT VOLATILITY: 51 to 52%

EVAPORATION RATE (BAc = 1): <1 (water)

10. STABILITY AND REACTIVITY:

STABILITY: This material is stable under normal storage conditions.

INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may yield the following: hydrogen fluoride and/or acrylic monomers.

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 slight eye irritation. Corneal injury is unlikely.

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SKIN: Prolonged contact may cause slight skin irritation with local redness. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated contact may cause flaking and softening of skin. Dithiopyr did not cause allergic skin reactions when tested in guinea pigs.

INGESTION: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

INHALATION: Mist may cause irritation of upper respiratory tract (nose and throat).

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Dithiopyr, in animals, effects have been reported on the following organs: liver, kidney, adrenal gland thyroid, gall bladder, and blood. In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

CANCER INFORMATION: Dithiopyr did not cause cancer in laboratory animals.

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: Dithiopyr, in animal studies, did not interfere with reproduction. Contains component(s), which did not interfere with fertility in animal studies.

MUTAGENICITY: For the component(s) tested, in-vitro and animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

Based largely or completely on information for dithiopyr.
Bioconcentration potential is moderate (BCF is between 100 and 3000 or Log Pow is between 3 and 5).
Expected to be relatively immobile in soil (Koc is >5000).

Based largely or completely on information for propylene glycol.
Bioconcentration potential is low (BCF is <100 or Log Pow <3).
Potential for mobility in soil is very high (Koc between 0 and 50).

DEGRADATION & PERSISTENCE:

Based largely or completely on information for propylene glycol.

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

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).

Based largely or completely on information for propylene glycol.

Acute LC₅₀ in fish are in the range of >10,000 to 55,000.

Acute immobilization EC₅₀ in water flea (*Daphnia magna*) is 26,500 mg/L.

Acute LC₅₀ in water flea (*Ceriodaphnia dubia*) is 15,000 mg/L.

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 and modes of transportation:
This material is not regulated for transport.

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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
Methyl Methacrylate	000080-62-6	5.28%

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 a chemical(s) known to the State of California to cause cancer. The chemical is naphthalene (CAS # 000091-20-3)

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
1,2-Propanediol (propylene glycol)	000057-55-6	PA1
Methyl Methacrylate	000080-62-6	NJ1 NJ2 NJ3 PA1 PA3
Naphthalene	000091-20-3	NJ2 NJ3 PA1 PA3

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

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

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

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal 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.

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#	RQ	% in Product
Methyl Methacrylate	000080-62-6	1000 lb.	5.28%
Naphthalene	000091-20-3	100 lb.	0.38%

RCRA CATEGORIZATION: U.S. EPA Hazardous Waste Numbers:

Methyl Methacrylate (CAS # 000080-62-6) = U162
Naphthalene (CAS # 000091-20-3) = U165

16. OTHER INFORMATION:

MSDS STATUS: Revised Sections: 3, 4, 8, & 13
Reference: DR-0371-5455
Replaces MSDS Dated: 12/9/03
Document Code: D03-163-004
Replaces Document Code: D03-163-003

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