

MATERIAL SAFETY DATA SHEET



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

Date: 6/1/01

DIMENSION* ULTRA 40 WP HERBICIDE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Dimension* Ultra 40 WP Herbicide

COMPANY IDENTIFICATION:
Dow AgroSciences
9330 Zionsville Road
Indianapolis, IN 46268

EMERGENCY TELEPHONE NUMBER:
800-992-5994

2. COMPOSITION/INFORMATION ON INGREDIENTS

No		CAS REG NO	WEIGHT (%)
1	Dithiopyr	97886-45-8	38-41
2	Aluminum silicate dihydrate	1332-58-7	59-62
3	Amorphous silica	7631-86-9	
4	Sodium lignosulfonate	8061-51-6	
5	Related reaction products	None	
6	Di-2-ethylhexyl sodium sulfosuccinate	577-11-7	
7	Quartz	14808-60-7	

NOTE: The "!", or "Bar", in the WEIGHT (%) column is used to denote two or more components whose weight percents sum to the total shown by the figure either to the right of or immediately above the "Bar".

See Section 8, Exposure Controls / Personal Protection

3. HAZARDS IDENTIFICATION

Primary Routes of Exposure

Inhalation
Eye Contact
Skin Contact

Inhalation

Inhalation of dust is possibly harmful.

Eye Contact

Direct contact with material can cause the following: slight irritation

Skin Contact

Prolonged or repeated skin contact can cause the following: possible skin irritation

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Delayed Effects

Repeated overexposure to the active ingredient in this material can cause the following: kidney effects - liver effects - blood effects - thyroid damage - adrenal effects. Crystalline silica is listed by the National Toxicology Program (NTP) as a reasonably anticipated cancer causing agent and by the International Agency for Research on Cancer (IARC) as a known cancer causing agent. Prolonged or repeated overexposure to component 7 can cause the following: silicosis, a pneumoconiosis which causes scar tissue

4. FIRST AID MEASURES

Inhalation

Move subject to fresh air.

Eye Contact

Flush eyes with water. Consult a physician if irritation persists.

Skin Contact

Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists. Remove and wash contaminated clothing thoroughly. Do not take clothing home to be laundered.

Ingestion

If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point	Not Applicable
Auto-ignition Temperature	No Data
Lower Explosive Limit	No Data
Upper Explosive Limit	No Data

Unusual Hazards

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

Extinguishing Agents

Use the following extinguishing media when fighting fires involving this material: carbon dioxide - dry chemical - water spray

Personal Protective Equipment

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

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Special Procedures

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

6. ACCIDENTAL RELEASE MEASURES

Personal Protection

Appropriate protective equipment must be worn when handling a spill of this material. See SECTION 8, Exposure Controls/Personal Protection, for recommendations. If exposed to material during clean-up operations, see SECTION 4, First Aid Measures, 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.

Procedures

Keep spectators away. Avoid breathing dust. Transfer spilled material to suitable containers for recovery or disposal. Keep dust to a minimum. WARNING: KEEP SPILLS AND CLEANING RUNOFFS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER.

7. HANDLING AND STORAGE

Storage Conditions

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.

Handling Procedures

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.

Other

Completely empty bag into application equipment. Dispose empty bag in a sanitary landfill or by incineration as allowed by state and local authorities. Avoid inhalation of smoke if incinerated.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limit Information

No		CAS REG NO	WEIGHT (%)
1	Dithiopyr	97886-45-8	38-41
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3	Amorphous silica	7631-86-9	
4	Sodium lignosulfonate	8061-51-6	
5	Related reaction products	None	
6	Di-2-ethylhexyl sodium sulfosuccinate	577-11-7	
7	Quartz	14808-60-7	1.5 MAX

Comp. No.	Units	Dow AgroSciences		OSHA		ACGIH	
		TWA	STEL	TWA	STEL	TWA	STEL
1	mg/m3	0.25	0.75	None	None	None	None
2	mg/m3	None	None	None	None	2 a	None
3	mg/m3	6.0 b	None	6.0 b	None	10 b	None
4		None	None	None	None	None	None
5		None	None	None	None	None	None
6		None	None	None	None	None	None
7	mg/m3	0.05 a	None	0.1 a	None	0.05 a	None

- a Respirable Fraction
- b Total Dust

End users must follow label instructions when using this product.

Respiratory Protection

A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required if airborne concentrations are maintained below the exposure limit listed in 'Exposure Limit Information'.

Up to 10 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) half-mask, air-purifying respirator.

Up to 50 times the exposure limit: Wear a properly fitted NIOSH approved (or equivalent) full-face piece, air-purifying respirator, OR full-face piece, airline respirator in the pressure demand mode.

Above 50 times the exposure limit or Unknown: Wear a properly fitted NIOSH approved (or equivalent) self-contained breathing apparatus in the pressure demand mode, OR full-face piece, airline respirator in the pressure demand mode with emergency escape provision.

Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and N100 filters. If oil mist is present, use R100 or P100 filters.

Eye Protection

Use chemical splash goggles (ANSI Z87.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

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Hand Protection

Chemical-resistant gloves should be worn whenever this material is handled. The glove(s) listed below may provide protection against permeation: Polyvinyl chloride-coated glove or other chemical-resistant rubber-coated glove. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

Other Protection

Use chemically resistant apron or other impervious clothing to avoid prolonged or repeated skin contact.

Engineering Controls (Ventilation)

Use local exhaust ventilation with a minimum capture velocity of 150 ft/min. (0.75 m/sec.) at the point of dust or mist evolution. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Other Protective Equipment

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color	Off-white, gray or tan
State	Powder
Odor Characteristic	Sulfur odor
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	Not Applicable
Melting Point	55°C/131°F
Boiling Point	Not Applicable
Solubility in Water	Dispersible
Percent Volatility	1 to 2 % Water
Evaporation Rate (BAc = 1)	Not Applicable

The physical and chemical data given in Section 9 are typical values for this product and are not intended to be product specifications.

See Section 5, Fire Fighting Measures

10. STABILITY AND REACTIVITY

Instability

This material is considered stable. However, avoid contact with ignition sources (e.g. sparks, open flame, and heated surfaces).

Hazardous Decomposition Products

There are no known hazardous decomposition products for this material.

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Hazardous Polymerization

Product will not undergo polymerization.

Incompatibility

Avoid contact with strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Acute Data

No toxicity data are available for this material.

Toxicity data for a compositionally similar material are listed below.

Oral LD50 - rat: >5000 mg/kg
Dermal LD50 - rabbit: >5000 mg/kg
Inhalation LC50 - rat: >5.0 mg/L for 4 hr
Eye Irritation - rabbit: slight irritation
Skin irritation - rabbit: practically non-irritating

Subchronic/Chronic Data

The following data pertains to studies conducted with the technical material, 91% min. active ingredient:
In repeat dosing studies (13-week), rodents fed dithiopyr technical exhibited liver toxicity; in dogs, changes in body weight, some organ weights, feed efficiency, and anemia with liver, kidney, thyroid, ovarian and adrenal effects occurred.
Similar doses given to dogs for a longer period (12-months) produced a transient increase in vomiting as well as liver toxicity.
Following repeated skin exposure (3-weeks) to dithiopyr technical, mild transient skin irritation and increased liver weights were the only effects observed in rats.

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Carcinogenicity Data

The following data pertains to studies conducted with the technical material, 91% min. active ingredient:
Liver toxicity and effects on adrenals and spleen were observed with long-term (18-month) feeding of dithiopyr technical to mice.
Liver and kidney toxicity were observed in a long-term feeding study (24-month) with rats.
Dithiopyr technical did not produce tumors in any of these studies.

Mutagenicity Data

The following data pertains to studies conducted with the technical material, 91% min. active ingredient:
This product does not pose a mutagenic hazard.

Reproductive/Teratology Data

The following data pertains to studies conducted with the technical material, 91% min. active ingredient:
No birth defects were noted in rats and rabbits given dithiopyr technical orally during pregnancy, even at amounts, which produced adverse effects on the mothers.
No effects were seen on the ability of male or female rats to reproduce when fed dithiopyr technical for two successive generations.
Decreased weight gain with liver, kidney, thyroid and adrenal toxicity were observed in adult animals, while decreased weight gains and liver toxicity were observed in young animals (pups and weanlings).

Sensitization Data

Sensitization data for a compositionally similar material are listed below.
Skin sensitization - guinea pig: No allergic response observed.

12. ECOLOGICAL INFORMATION

Environmental Toxicity

Bluegill sunfish (*Lepomis macrochirus*), 96 Hour LC50: 0.47 mg/l
Rainbow trout (*Salmo gairdneri*), 96 Hour LC50: 0.46 mg/l
Daphnia magna, 48 Hour LC50: 5.2 mg/l
Bobwhite quail, 5 Day Dietary LC50: > 5620 ppm
Mallard duck, 5 Day Dietary LC50: > 5620 ppm
Bobwhite quail, Acute oral LD50: > 2250 mg/kg
Honeybee, LD50: 81 µg/bee
Earthworm, 14 Day Immersion LC50: > 1000 mg/kg

This material is toxic to fish.
The above Environmental Toxicity data are from studies conducted on the technical material, 91% min. active ingredient.

13. DISPOSAL CONSIDERATIONS

Procedure

For disposal, incinerate this material at a facility that complies with local, state, and federal regulations.

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14. TRANSPORT INFORMATION

US DOT Hazard Class NON-REGULATED

This classification is used when shipping in non-bulk packages for domestic surface transportation only. Exceptions in CFR 49 Parts 171-177 may apply. Consult CFR 49 Parts 171-177 to determine appropriate classification when shipping in bulk packages or when shipping by air or ocean.

15. REGULATORY INFORMATION

Workplace Classification

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product is subject to regulation under the Canadian Pest Control Products Act (P.C.P. Act). Therefore, this product is excluded from the supplier labeling and material safety data sheet requirements as specified in Section 12 of the Hazardous Products Act.

SARA TITLE 3: Section 311/312 Categorizations (40 CFR 370)

This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as a delayed health hazard.

SARA TITLE 3: Section 313 Information (40CFR 372)

This product does not contain a chemical, which is listed in Section 313 at or above de minimis concentrations.

CERCLA Information (40 CFR 302.4)

Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

Waste Classification

When a decision is made to discard this material as supplied, it does not meet RCRA's characteristic definition of ignitability, corrosivity, or reactivity, and is not listed in 40 CFR 261.33. The toxicity characteristic (TC), however, has not been evaluated by the Toxicity Characteristic Leaching Procedure (TCLP).

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United States

This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and is therefore exempt from U.S. Toxic Substances Control Act (TSCA) Inventory listing requirements.

16. OTHER INFORMATION

MSDS STATUS: New

Document Code: D03-164-001

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