

MATERIAL SAFETY DATA SHEET

MANITOU DF

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

ALTITUDE CROP INNOVATIONS LLC
4850 Hahns Peak Drive, Suite 200
Loveland, CO 80538

PRODUCT NAME: MANITOU DF

EPA REG. NO.: 89168-30-91395

CHEMICAL NAME: Metribuzin: 4-Amino-6-(1,1-dimethylethyl)-3-(methylthio)-1,2,4-triazin-5(4h)-one

CHEMICAL FAMILY: Herbicide

Hotline Numbers: For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION: May be harmful if swallowed or absorbed through skin. Causes moderate eye irritation.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Metribuzin	75	21087-64-9	5 mg/m ³
Total crystalline silica	< 1	14808-60-7	0.05 mg/m ³

4. FIRST AID MEASURES

IF SWALLOWED: 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING: 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.

IF IN EYES: Hold eye 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 eye. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician: Treat patient symptomatically.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 or call your poison control center at 1-800-222-1222.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): Not applicable

FLAMMABLE LIMITS (LFL & UFL): Not applicable

EXTINGUISHING MEDIA: Water, dry chemical.

HAZARDOUS COMBUSTION PRODUCTS: Toxic fumes may be emitted in a fire situation.

SPECIAL FIRE FIGHTING PROCEDURES: Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems are preferred to prevent environmental damage from excessive water runoff.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Appropriate preventative measures should be taken. If a large dust cloud develops, turn off any devices that may cause a spark and leave the area until the cloud dissipates.

FIRE FIGHTING EQUIPMENT: Self-contained breathing apparatus with full facepiece. Full fire fighting turn-out gear (Bunker gear).

HAZARDOUS COMBUSTION PRODUCTS: Normal combustion forms carbon dioxide, water vapor and may produce oxides of carbon, nitrogen and organic sulfides.

6. ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions in Section 8 of this document. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. **SMALL SPILL:** Vacuum or sweep up material and place in a container for reuse or disposal. **LARGE SPILL:** Vacuum or sweep up material and place in a container for reuse or disposal. After removal, flush contaminated area thoroughly with water. Pick up wash liquid with additional absorbent and place in a disposable container.

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This material should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Wear appropriate personal protection equipment. (See Exposure Controls, Personal Protection section.)

7. HANDLING AND STORAGE

HANDLING: Use only in a well-ventilated area. Minimize dust generation and accumulation.

STORAGE: Keep container closed when not in use. Keep away from food, feed and drinking water. Store in a well ventilated, dry place. Do not exceed 30 day average of 100° F (37.78° C)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

RESPIRATORY PROTECTION: Ensure good ventilation; when using in an enclosed area always wear an appropriate dust/mist filtering mask.

EYE PROTECTION: Wear chemical goggles or shielded safety glasses when handling and mixing product.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, shoes plus socks and chemical-resistant gloves. Always refer to the label of the pesticide(s) in the tank mix and follow the most restrictive requirements.

Personal Protective Equipment (PPE): Eye protection, long sleeved shirt and long pants, shoes plus socks and chemical resistant gloves. Follow manufacturer's instructions for cleaning/maintaining PPE. If not such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Brown granules, faint

SPECIFIC GRAVITY (Water=1): Not Applicable

VAPOR PRESSURE: Not Applicable

PERCENT VOLATILE (by volume): Not Applicable

Note: These physical data are typical values based on material tested but may vary from sample to sample.

Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

SOLUBILITY: Soluble **pH:** No data

BULK DENSITY: 0.429-0.525 g/mL at 20° C

BOILING POINT: Not Applicable

EVAPORATION RATE: Not Applicable

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Avoid exposure to high moisture and high heat areas for extended times.

IMCOMPATIBILITY: Avoid strong acids and alkalis.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: May emit toxic fumes if excessively heated.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀: 2,365 mg/kg (male rat); 1,449 mg/kg (female rat)

Eye Irritation: Moderate irritation (rabbit)

Inhalation LC₅₀: >4.84 mg/L (4-hour)(male and female rat)

Carcinogenic Potential: None listed in OSHA, NTP, IARC, or ACGIH

Acute Dermal LD₅₀: >2,000 mg/kg (male and female)

Skin Irritation: Slight irritation (rabbit)

Skin sensitization: Not a contact sensitizer

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This pesticide is toxic to birds. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

13. DISPOSAL CONSIDERATIONS

End users must dispose of any unused product as per the label recommendations.

Do not reuse product containers. Pesticide wastes are toxic. Dispose of in accordance with applicable Federal, state and local laws and regulations. Refer to product label for complete product and container disposal instructions.

14. TRANSPORT INFORMATION

DOT SHIPPING DESCRIPTION: Not regulated by DOT

DOT HAZARD CLASS: Not Applicable

UN NUMBER: Not Applicable

DOT PACKING GROUP: Not Applicable

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DOT PRIMARY/SECONDARY LABEL: None
DOT PRIMARY/SECONDARY PLACARD: None

15. REGULATORY INFORMATION

NFPA RATINGS: Least = 0 Slight = 1 Moderate = 2 High = 3 Severe = 4
Ratings for this product: Health – 1 Flammability – 3 Instability – 0 Special Hazards – None Specified

SARA Title III Hazard Category: Immediate Y Fire N Sudden Release of Pressure N
Delayed Y Reactive N

Reportable Quantity (RQ) under U.S. CERCLA: Not listed

SARA, Title III, Section 313: Not listed

CA Proposition 65: Not listed

16. OTHER

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