MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company Address:
Winfield Solutions, LLC
P.O. Box 64589
St. Paul, MN 55164-0589

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC: 1-800-424-9300 (24 hours)
FOR MEDICAL EMERGENCY call (877) 424-7452

Product Name:	**Dimetric™ DF 75%**
Date:	**09/14/07**
Supercedes:	
EPA Registration No.	**1381-197**
Product Use:	This product is an herbicide used for the control of certain grasses and broadleaf weeds.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No	Average % by Weight
Metribuzin	21087-64-9	75.00
Sodium aluminum silicate	1344-00-9	1.00
Quartz (Silica, Crystalline)	14808-60-7	0.40

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview	Caution! Harmful if swallowed, inhaled or absorbed through the skin. Moderate eye irritation. Avoid contact with skin, eyes and clothing.
Physical State	solid crystalline
Odor	musty
Appearance	off-white
Routes of Exposure	Skin contact, Skin Absorption, Eye contact
Immediate Effects	
Eye	Moderate eye irritation
Skin	May be harmful if absorbed through skin.
Ingestion	May be harmful if swallowed.
Chronic or Delayed Long Term	This product is not listed as a carcinogen by ACGIH, NTP, IARC, or OSHA. However, it may contain crystalline silica (quartz), a substance which has been listed as a carcinogen by ACGIH, NTP and IARC. Crystalline silica is a naturally-occurring mineral component of many sands and clays. Although the carcinogenic potential of crystalline silica in humans is controversial, it must be considered if it is inhaled under excessive exposure conditions. The respirable portion of the silica that may be contained in this product, however, is small, such that inhalation exposure during anticipated conditions of use is minimal.
Medical Conditions Aggravated by Exposure	No specific medical conditions are known which may be aggravated by exposure to this product. As with all materials which can cause upper respiratory tract irritation, persons with a history of asthma, emphysema, or hyperreactive airways disease may be more susceptible to overexposure. Pulmonary and respiratory diseases may be aggravated by exposure to respirable crystalline silica.

SECTION 4. FIRST AID MEASURES

General	Have the product container or label with you when calling a poison control center or doctor or going for treatment.
Eye	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.
Skin	Take off all contaminated clothing immediately. Rinse immediately with plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
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 directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.
Inhalation	Move 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.
Notes to Physician	
Signs and Symptoms	Poisoning is accompanied by breathing difficulties and sedation.
Treatment	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Flashpoint	not applicable
Suitable Extinguishing Media	water, dry chemical
Fire Fighting Instructions	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Methods for Cleaning UP	Isolate hazard area. Keep unauthorized people away. Avoid dust formation. Avoid contact with spilled product or contaminated surfaces. Sweep up and shovel into suitable containers for disposal. Use proper protective equipment to minimize personal exposure (see section 8). Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.
Additional Advice	Use dry absorbent material such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers, or other waterways or contact vegetation.

SECTION 7. HANDLING AND STORAGE

Storing Procedures	Keep tightly closed in a dry, cool and well-ventilated place. Store in an area that is out of reach of children and animals, away from the home or home garden. Do not contaminate water, food, or feed by storage or handling.

Work/Hygienic Procedures Wash hands always before eating, drinking, smoking or using the toilet. Remove clothing immediately if pesticide gets inside. Remove Personal Protective Equipment (PPE) immediately after handling this product. As soon as practical, wash thoroughly and change into clean clothing.

Min/Max Storage Temperatures 30 day average not to exceed 100 F

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

General Protection Train employees in safe use of the product. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Follow all label instructions. Avoid contact with skin and eyes.

Eye/Face Protection Safety glasses with side-shields

Hand Protection Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton)

Respiratory Protection When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or Industry recommendations.

Exposure Limits

Metribuzin	21087-64-9	ACGIH	TWA	5 mg/m3
		NIOSH	REL	5 mg/m3
		OSHA Z1A	TWA	5 mg/m3
		US CA OEL	TWA PEL	5 mg/m3
Quartz (Silica, Crystalline)	14808-60-7	ACGIH	TWA	0.05 mg/m3
		Form of Exposure		Respirable fraction.
		ACGIH NIC	TWA	0.025 mg/m3
		Form of Exposure		Respirable fraction.
		NIOSH	REL	0.05 mg/m3
		Form of Exposure		Respirable dust.
		OSHA Z1A	TWA	0.1 mg/m3
		Form of Exposure		Respirable dust.
		Z3	TWA	2.4 millions of particles per cubic foot of air
		Form of Exposure		Respirable.
		Remarks		The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
		Z3	TWA	0.1 mg/m3
		Form of Exposure		Respirable.
		Remarks		The value is

				calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
		Z3	TWA	0.3 mg/m3
		Form of Exposure		Total dust.
		Remarks		The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.
		US CA OEL	TWA PEL	0.1 mg/m3
		Form of Exposure		Respirable dust.
		US CA OEL	TWA PEL	0.3 mg/m3
		Form of Exposure		Total dust.
		OSHA Z1	PEL	5 mg/m3
		Form of Exposure		Respirable fraction.
		OSHA Z1	PEL	15 mg/m3
		Form of Exposure		Total dust.
Sodium aluminum silicate	1344-00-9	ACGIH	TWA	2 mg/m3
		Expressed as		as Al
		NIOSH	REL	2 mg/m3
		Expressed as		as Al
		OSHA Z1A	TWA	2 mg/m3
		Expressed as		as Al
		US CA OEL	TWA PEL	2 mg/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	off-white
Physical State	solid crystalline
Odor	musty
Bulk Density	33 – 37 lbs/cu.ft.
Water Solubility	dispersible

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Conditions To Avoid	Sustained temperatures above 100°F. aqueous alkaline conditions.
Incompatibility	strong bases, ketones, aldehydes
Hazardous Decomposition Products	Thermal decomposition, amines, sulfur dioxide, carbon dioxide (CO_2), mercaptans
Hazardous Reactions	Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the active ingredient, metribuzin.

Acute Oral Toxicity	male rat: LD50: 2,365 mg/kg female rat: LD50: 1,449 mg/kg
Acute Dermal Toxicity	male/female rat: LD50: >2,000 mg/kg male/female rabbit: LD50: >5,000 mg/kg
Acute Inhalation Toxicity	male/female rat: LC50: >19.36 mg/l Exposure time: 1 h Determined in the form of dust. Extrapolated from the 4 hr LC50. male/female rat: LC50: >4.84 mg/l Exposure time: 4 h Determined in the form of dust.
Skin Irritation	rabbit: Mild skin irritation
Eye Irritation	rabbit: Moderate eye irritation
Sensitization	guinea pig: Non-sensitizing
Subchronic Toxicity	Metribuzin caused increased cholesterol levels, liver enzyme induction and secondary effects on thyroxin levels in a subacute dermal toxicity study in rabbits. In subacute inhalation studies, rats exposed to aerosol concentrations of metribuzin exhibited behavioral changes, liver enzyme induction and secondary effects on organ weights associated with decreased body weight gains.
Chronic Toxicity	Major effects in rats and dogs from long-term exposure to metribuzin included decreased body weight gains, decreased food consumption, anemia, mortality and/or organ effects (liver, kidney, thyroid, testis).
Assessment Carcinogenicity	In oncogenicity studies in rats and mice, metribuzin was not considered carcinogenic in either species.

ACGIH		
Metribuzin	21087-64-9	Group A4
Quartz (Silica, Crystalline)	14808-60-7	Group A2
NTP		
Quartz (Silica, Crystalline)	14808-60-7	
IARC		
Quartz (Silica, Crystalline)	14808-60-7	Overall evaluation: 1
OSHA		
None		

Reproductive & Developmental Toxicity	Reproduction: There was no evidence of reductive toxicity in a 2-generation reproductive study in rats treated with metribuzin. Offspring at the highest dose exhibited reduced body weight gains starting a Day-14 lactation, an age correlating with the consumption of treated diets. Developmental Toxicity: In developmental toxicity studies in rats and rabbits, there was no evidence of a teratongenic potential for metribuzin. In rats, secondary developmental effects were observed only at the high dose and in conjunction with maternal toxicity.
Neurotoxicity	Transient neurobehavioral symptoms were observed in an acute oral neurotoxicity screening study in rats treated with metribuzin.

There were no correlating morphological changes observed in the neural tissues. There was no evidence of neurotoxicity in a subchronic neurotoxicity screening study in rats treated with dietary concentrations of metribuzin.

Mutagenicity Numerous in vitro and in vivo mutagenicity studies have been conducted with metribuzin. The data, taken collectively, demonstrates that metribuzin is not genotoxic.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions Apply this product only as specified on the label. Because of possible harmful effects on water organisms, do not allow to enter into drains, streams, rivers, lakes or other water sources.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance Do not re-use empty containers. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Follow container label instructions for disposal of wastes generated during use in compliance with the product label.

SECTION 14. TRANSPORT INFORMATION

DOT CLASSIFICATION: Not regulated for Domestic Surface Transportation

FREIGHT CLASSIFICATION:

Compounds, Tree or Weed killing, N.O.I., other than poison, having a density of 20 lbs. or greater per cubic foot

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 1381-197

US Federal Regulations

TSCA list

Sodium aluminium silicate	1344-00-9
Quartz (Silica, Crystalline)	14808-60-7

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

None

SARA Title III – Section 302 – Notification and Information

None

SARA Title III – Section 313 – Toxic Chemical Release Reporting

Metribuzin	21087-64-9

US States Regulatory Reporting

CA Prop65

This product contains a chemical known to the State of California to cause cancer.

Quart (Silica, Crystalline)	14808-60-7

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients

Metribuzin	21087-64-9	IL, MN, NJ, RI
Sodium aluminum silicate	1344-00-9	CA, IL, MN
Quartz (Silica, Crystalline)	14808-60-7	IL, MA, MN, RI

Canadian Regulations

Canadian Domestic Substance List

Sodium aluminum silicate	1344-00-9
Quartz (Silica, Crystalline)	14808-60-7

Environmental

CERCLA

None.

Clean Water Section 307 Priority Pollutants

None.

Safe Drinking Water Act Maximum Contaminant Levels

None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)

Metribuzin	21087-64-9
Sodium aluminum silicate	1344-00-9
Quartz (Silica, Crystalline)	14808-60-7

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):

Health – 1 Flammability – 3 Reactivity – 1 Others – none

0=minimal hazard, 1=slight hazard, 2=moderate hazard, 3-severe hazard, 4-extreme hazard

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions.