MATERIAL SAFETY DATA SHEET

WINFIELD SOLUTIONS, LLC

PRODUCT NAME(S)

For Medical Emergency Call:
800-424-9300 (CHEMTREC, 24 hours) OR
Medical Call: 877-424-7452

STRIKE THREE

Effective Date: 04/09/08

I. IDENTIFICATION

CHEMICAL NAME OF PRIMARY COMPONENT(S):
1) Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid
2) 2(-4-chloro-2-methylphenoxy) propionic acid
3) 3-6-dichloro-2-methoxybenzoic acid

FORMULA: $C_{16}H_{22}Cl_2O_3$
$C_{10}H_{11}Cl\ O_3$
$C_8H_6Cl_2O_3$

MOLECULAR WEIGHT: 267.04
200.63
221.04

SYNONYMS: 2,4-D, CMPP Mecoprop, Dicamba

CAS # & NAME: 94-75-7 2,4-D
7085-19-0 CMPP
1918-00-9 Dicamba

EPA Reg No. 14774-2

II. INGREDIENTS / ACUTE TOXICITY DATA

INGREDIENTS	CAS NUMBER	PERCENT
Dimethylamine salt of 2,4-D	94-75-7	30.56%
Mecoprop	7085-19-0	16.34%
Dicamba	1918-00-9	2.77%
Formulation aids		50.33%

	NFPA 1/	HMIS 2/
HEALTH	2	2
FIRE	0	0
REACTIVITY	0	0

1/ National Fire Protection Association Rating
2/ Hazardous Materials Identification System
(4 = Extreme/Severe 3 = High/Serious 2 = Moderate 1 = Slight 0 = Minimum)

SARA TITLE III HAZARD CLASSIFICATION

IMMEDIATE (ACUTE) HEALTH	Yes
DELAYED (CHRONIC) HEALTH	Yes
FIRE	No
SUDDEN RELEASE OF PRESSURE	No
REACTIVE	No

III. PHYSICAL DATA

SPECIFIC GRAVITY: 1.16
BOILING POINT: Not determined
FREEZING POINT: Not determined
VAPOR PRESSURE: Not determined
SOLUBILITY IN WATER: Soluble
APPEARANCE: Amber to dark amber liquid
ODOR: Ammonia/phenolic odor

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: Not applicable
FLAMMABLE LIMITS IN AIR: Not determined
AUTOIGNITION TEMPERATURE: Not determined
EXTINGUISHING MEDIA: Use carbon dioxide or dry chemical for small fires and water fog or foam (alcohol, polymer or ordinary) for large fires. Water stream may spread flames.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Noxious fumes may be emitted under fire conditions. .
SPECIAL FIRE FIGHTING PROCEDURES: Fire fighters should use self contained breathing apparatus and full turnout gear. Prevent runoff of fire water. Avoid exposure to smoke.

V. REACTIVITY DATA

STABILITY: Stable under normal conditions.
CONDITIONS TO AVOID: Avoid freezing and extreme heat conditions
MATERIALS TO AVOID: Strong bases and acids
HAZARDOUS DECOMPOSITION PRODUCTS: Ammonia, oxides of carbon, nitrogen oxide, hydrogen cyanide, hydrogen chloride.
HAZARDOUS POLYMERIZATION: Will not occur

VI. HEALTH HAZARD DATA/FIRST AID PROCEDURES

TOXICOLOGY DATA:

Acute Oral LD_{50} (rat):	2,4 D	375 mg/kg (technical 2,4 D acid)
	Mecoprop	930 mg/kg (technical)
	Dicamba	1700 mg/kg (technical)
Acute Dermal LD_{50} (rabbit):	Not determined	
Acute Inhalation:	Not determined	
Eye Irritation (rabbit):	Non irritant	
Dermal Irritation (rabbit):	Slight irritant	
Dermal Sensitization:	Not expected to cause skin sensitization	

EXPOSURE LIMITS:

CHEMICAL NAME(S)	ACGIH (TLV)	OSHA (TWA)
2,4 D	10 mg/m^3	10 mg/m^3

CARCINOGENICITY, TERATOGENICITY, MUTAGENICITY: The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, limited evidence for carcinogenicity in humans. The Science Advisory Panel of EPA has given a Class D classification (not classifiable as to human carcinogenicity) and has required additional animal studies on 2,4 D. Animal studies with the active ingredients in this product have shown that they are not mutagenic or teratogenic.
SIGNS OF POISONING: When administered in large doses to animals, the most characteristic sign of poisoning is myotonia.
PRIMARY ROUTES OF ENTRY: Ingestion, skin and/or eye contact
EFFECTS OF SINGLE OVEREXPOSURE:
Swallowing: May cause nausea, vomitting, abdominal pain, muscle weakness, myotonia and fall in blood pressure. May cause burns of mouth, throat, esophagus.
Skin Absorption: May lead to nausea, abdominal pain, muscle weakness, myotonia and fall in blood pressure.
Inhalation: No specific information, but probably harmful if inhaled and may lead to signs and symptoms described above for skin absorption. Vapors or sprays (mists) may be irritating to the respiratory tract.
EFFECTS OF REPEATED OVEREXPOSURE: Repeated overexposure to phenoxy herbicides may cause liver, kidney, gastrointestinal, and muscular effects. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed to substantiate these observations, even at high doses for prolonged periods.
OTHER EFFECTS OF OVEREXPOSURE: See NOTE TO PHYSICIAN.
EXISTING MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE: Skin contact may aggravate preexisting skin conditions. Inhalation of mists may aggravate preexisting respiratory conditions.
EMERGENCY AND FIRST AID PROCEDURES:

Swallowing: Call a physician or poison control center. If patient is conscious and alert, give 2-3 glasses of water. Do not induce vomiting. PRECAUTION: To prevent the aspiration of swallowed product, lay patient on side with the head lower than the waist.

Skin: Wash affected area with plenty of soap and water. Remove contaminated clothing. Launder contaminated clothing.

Inhalation: Remove victim to fresh air. If not breathing, administer artificial respiratrion. GET MEDICAL ATTENTION.

Eyes: Hold eyelids open and flush with a steady stream of water for at least 15 minutes. GET MEDICAL ATENTION.

NOTE TO PHYSICIAN: No specific antidote is available. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. The stomach should be evacuated by gastric intubation. After removal of stomach contents, wash stomach by instilling 30-50 g of activated charcoal in 3-4 ounces of water through the stomach tube and again remove stomach contents. Avoid oily laxatives.
This product contains a phenoxy herbicide. Myotoxic effects may include muscle fibrillation, myotonia, and muscular weakness. Ingestion of massive doses may result in persistent fall of blood pressure. Myoglobin and hemoglobin may be found in urine. Elevations in lacate dehydrogenase (LDH), SGOT, SGPT and aldolase indicate the extent of muscle damage. It has been suggested that overexposure in humans may affect both the central and peripheral nervous systems. The acute effects on the central nervous system resemble those produced by alcohol or sedative drugs. In isolated cases, peripheral neuropathy and reduced nerve conduct velocities have been reported although these observation may be related to other factors.

VII. PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Dike the area using absorbent or materials such as sand or clay. Recover and contain as much product as possible using absorbent. Clean spill area using a solution of water and detergent. Collect and contain wash water and all contaminated absorbent for disposal. If spilled on the ground, the affected area should be excavated to a depth of 1 - 2 inches. Prevent the spilled product or washings from reaching public sewers or waterways. Wear appropriate protective equipment during the cleanup. Ensure that tools and equipment are adequately decontaminated.
WASTE DISPOSAL METHOD: Dispose of in accordance with federal, state and local regulations.
CONTAINER DISPOSAL: Dispose of in an approved facility according to federal, state and local regulations.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in a cool, dry, secure area away from sources of heat.

VIII. SPECIAL PROTECTION INFORMATION

PROTECTIVE EQUIPMENT SHOULD BE USED DURING THE FOLLOWING PROCEDURES:

- Manufacture or formulation of this product.
- Repair and maintenance of contaminated equipment.
- Clean up of leaks and spills.
- Any other activity that may result in hazardous exposures.

RESPIRATORY PROTECTION: If required, use NIOSH/MSHA approved respirator for organic vapors. Use positive pressure contained breathing apparatus where emergency conditions or where exposure limits are exceeded.
VENTILATION: Local exhaust
PROTECTIVE CLOTHING: Chemical resistant gloves, coveralls, apron and foot coverings.
EYE PROTECTION: Safety goggles.
USER SAFETY RECOMMENDATIONS: Safety showers and eye wash should be easily accessible.

IX. REGULATORY STATUS

TSCA INVENTORY STATUS:
TRANSPORTATION STATUS:
DOT INFORMATION:

Container Capacity	Proper Shipping Name	Hazard Class	Label	Packing Group
Greater than 32 gallons	RQ, Environmentally hazardous substances, liquid, N.O.S. (contains 2,4 D acid), UN 3082	9	9	III

SARA TITLE III

Section 302-304 (40 CFR 350):
Extremely Hazardous Substance (EHS): Not listed
Section 312, Reporting (40 CFR 370):
SARA/OSHA Hazardous Chemical Reporting Quantity: 10,000 pounds
Section 313, Toxic Chemicals: 2,4-D acid, Dicamba, Mecoprop
Reportable Quantity (RQ): 2,4 D - 100 lbs, Dicamba - 1000 lbs
RCRA HAZARDOUS WASTE: 2,4 D U240

International Right-To-Know Regulations:

X. REFERENCES

1) Supplier sponsored studies.