

NFPA HAZARD RATING				U.S. TRANSPORT SUMMARY	
0	Least				Regulated by the U.S. DOT as a hazardous material in quantities greater than 41 gallons. See Section 14 for additional information.
1	Slight	3	Health		
2	Moderate	1	Flammability		
3	High	0	Reactivity		
4	Severe				

SECTION 1: IDENTIFICATION	
Product Name: Strike Three® EPA Registration #: 14774-2 Product ID/Unity #: 1400393, 1400395, 1400397, 1400398 Common Name: Mixture of 2,4-D, Mecoprop-p (MCP-p) and Dicamba Chemical Description: Mixture of 2,4-D, Mecoprop-p (MCP-p) and Dicamba Recommended Uses: Agricultural herbicide – See product label for complete list of uses and use sites. Restrictions for Use: See product label for information regarding restrictions on the use of this product.	
Manufactured For: WINFIELD SOLUTIONS, LLC P. O. Box 64589 St. Paul, MN 55164-0589	MEDICAL EMERGENCY TELEPHONE NUMBER: 1-877-424-7452 (24hrs) Non-Emergency Business Inquiries: 1-855-494-6343 Mon – Fri 8am – 5pm (Central Standard Time)
FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL: CHEMTREC 1-800-424-9300 (24 hours)	

SECTION 2: HAZARDS IDENTIFICATION	
EMERGENCY OVERVIEW: Dark brown liquid with a mild odor. Causes severe eye damage. Harmful if inhaled. Causes skin irritation. Acutely hazardous to the aquatic environment. Keep out of waterways.	
POTENTIAL HEALTH EFFECTS: Eyes: Causes irreversible eye damage. Skin: Slightly toxic and slightly irritating based on toxicity studies. Inhalation: Harmful if inhaled. Overexposure may cause upper respiratory tract irritation and symptoms similar to those from ingestion. Ingestion: Harmful if swallowed. May cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness and muscle spasms. Preexisting Conditions: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease. Chronic Health Effects: Repeated overexposure to phenoxy herbicides may cause effects to liver, kidneys, blood chemistry and gross motor function. See Section 11 for additional information.	
Carcinogenicity	NTP: Not listed IARC: Chlorophenoxy Herbicides – Group 2B OSHA: Not listed
OSHA HCS 2012 CLASSIFICATION: Acute Inhalation Toxicity Category 4; Eye Irritation/Corrosion Category 1; Skin Irritation Category 2; Specific Target Organ Toxicity – Repeated Exposure Category 2	
SIGNAL WORD: DANGER	
HAZARD STATEMENTS: Harmful if inhaled. Causes serious eye damage. Causes skin irritation. May cause damage to organs (liver, kidneys) through prolonged or repeated exposure. Percent of product with unknown toxicity: 0%	
  	

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PRECAUTIONARY STATEMENTS:

Prevention: Wash hands thoroughly after handling. Wear protective gloves and eye and face protection. Do not breathe mist, vapors, or spray. Use only outdoors or in a well-ventilated area.

Response: **If inhaled:** Remove person to fresh air and keep comfortable for breathing. Call a poison control center (1-877-424-7452) or doctor for treatment advice if you feel unwell. **If in eyes:** Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison control center (1-877-424-7452) or doctor for treatment advice. **If on skin:** Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. Get medical attention if you feel unwell.

Storage: See section 7 for storage information.

Disposal: Dispose of contents/container in accordance with Federal, state and local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	% (wt)	CAS Reg. #
Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid	30.56%	2008-39-1
Dimethylamine salt of (+) -R-2-(2-Methyl-4-Chlorophenoxy) propionic acid	8.17%	66423-09-4
Dimethylamine salt of Dicamba (3,6-Dichloro-o-anisic acid)	2.77%	2300-66-5
*Ingredients not specifically listed are non-hazardous and/or are considered to be confidential business information under 29 CFR 1910.1200(j).		
See Section 8 for exposure limits.		

SECTION 4: FIRST AID MEASURES

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs. If person is not breathing, call 911 or an ambulance.

Ingestion: Seek medical attention or call a poison control center immediately for treatment advice. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eyes: Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention immediately.

Skin: Remove contaminated clothing and wash before re-using. Flush skin with water and then wash with soap and water. Seek medical attention if irritation occurs.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use foam, dry chemical, or water spray

Special Fire Fighting Procedures: Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Avoid breathing vapors; keep upwind. Minimize use of water to prevent environmental contamination.

Hazardous Combustion Products: Hydrogen chloride, carbon oxides and nitrogen oxides.

Unusual Fire and Explosion Hazards: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Environmental Precautions: Extremely toxic to fish and water organisms. Keep spilled product from entering sewers and waterways.

Methods for Containment: Contain spilled product by diking area with sand or earth.

Methods for Clean-up: Cover spilled product with an inert absorbent material such as sand, vermiculite or other appropriate material. Vacuum, scoop or sweep up material and place in a container for disposal. Do not place spilled material back in original container.

Other Information: Spills of this product may require reporting under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as the product contains 2,4-Dichlorophenoxyacetic acid (2,4-D) with a reportable quantity (RQ) of 100 lbs. See Section 15 for additional information.

SECTION 7: HANDLING AND STORAGE

Handling: RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS AND WORKERS must refer to the pesticide product label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Immediately clean up spills that occur during handling. Keep containers closed when not in use. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. Wash outside of gloves before removing. Remove Personal Protective Equipment (PPE) immediately after handling this product.

Storage: Store in cool, dry areas away from children, feed and food products and sources of heat. Store in original container with lid tightly closed. If allowed to freeze, remix before using. **See pesticide product label for additional storage information.**

Minimum Storage Temperature: 32°F

Other Precautions: Consult Federal, state and local laws and regulations pertaining to storage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines**

Component:	OSHA PEL	ACGIH TLV	NIOSH REL
Dimethylamine salt of 2,4-Dichlorophenoxyacetic acid	10 mg/m3 (TWA)	10 mg/m3 (TWA)	

NOTE TO END USERS: PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CLOTHING LISTED IN THIS SECTION IS FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD REFER TO THE PESTICIDE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CLOTHING.

Respiratory Protection: Not required when handled under normal, well-ventilated conditions. When handling in enclosed areas with inadequate ventilation, use a dust/mist filtering respirator approved for pesticides.

Engineering Controls: **Local Exhaust:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.

Protective Gloves: Wear chemical resistant gloves made of materials such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyvinyl chloride (PVC) or viton.

Eye Protection: Wear chemical goggles or safety glasses and full-face shield. Contact lenses are not eye protective devices. An emergency eyewash or water supply should be readily accessible to the work area.

Other Protective Clothing or Equipment: Wear coveralls over a long sleeve shirt and long pants along with chemical resistant footwear plus socks to prevent skin exposure.

Work/Hygienic Practices: Never eat, drink, nor use tobacco in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid	Specific Gravity (H₂O=1):	1.127 (typical)
Vapor Pressure (mm Hg):	Not available	Density (lbs/gallon):	9.4 lbs/gallon (typical)
Vapor Density (Air=1):	Not available	Melting Point/Freezing Point:	32°F (0°C)
Solubility in Water (wt %):	Soluble	Boiling Point/Range:	Not available
Viscosity:	7.95 cPs @ 21°C	pH:	6.0 – 8.0
Appearance and odor:	Dark brown liquid with a mild odor.	Flash Point:	Not applicable due to aqueous formulation.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None known

Chemical Stability: Product is stable at ambient temperature and pressure, under normal storage and handling conditions.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Avoid excessive heat. Do not store near heat or flame.

Incompatible Materials: Strong oxidizing agents, bases and acids.

Hazardous Decomposition Products: Under fire conditions, product may produce hydrogen chloride as well as oxides of carbon and nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION**ACUTE TOXICITY**

Eye Effects: Causes irreversible eye damage. Vapors and mist can cause irritation.

Skin Effects: Slight irritant (rabbit); Not a skin sensitizer; LD50 >5,000 mg/kg (rabbit)

Acute Inhalation Effects: LC50 >2.14 mg/L (rat)

Acute Oral Effects: LD50 >1,697 mg/kg (rat)

Specific Target Organ Toxicity: Liver, kidneys

CHRONIC TOXICITY

Chronic Effects: Repeated overexposure to phenoxy herbicides may cause effects to liver, kidneys, blood chemistry and gross motor function. 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. Repeated exposure to dicamba may cause liver changes or a decrease in body weight.

Carcinogenicity: The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, more current 2,4-D lifetime feeding studies in rats and mice, as well as an MCPP lifetime feeding study in rats, did not show carcinogenic potential. The U.S. EPA has given 2,4-D and Dicamba a Class D classification (not classifiable as to human carcinogenicity).

Mutagenicity: There have been some positive and some negative studies, but weight of evidence is that neither 2,4-D nor MCPP is mutagenic. Animal studies with dicamba have not demonstrated mutagenic effects.

Teratogenicity: Studies in laboratory animals with 2,4-D and MCPP have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. Animal tests with Dicamba have not demonstrated developmental effects.

Reproductive Toxicity: No components are anticipated to have an effect on the reproductive system.

POTENTIAL HEALTH EFFECTS:

Eyes: Causes irreversible eye damage.

Skin: Slightly toxic and slightly irritating based on toxicity studies.

Inhalation: Harmful if inhaled. Overexposure may cause upper respiratory tract irritation and symptoms similar to those from ingestion.

Ingestion: Harmful if swallowed. May cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness and muscle spasms.

SECTION 12: ECOLOGICAL INFORMATION**ENVIRONMENTAL SUMMARY:** This product is toxic to aquatic invertebrates.**ECOTOXICITY DATA:**

Fish Acute and Prolonged Toxicity:	2,4-D Dimethylamine Salt: 96-hr LC50 Bluegill = 524 mg/l 96-hr LC50 Rainbow Trout = 250 mg/l Mecoprop-p: 96-hr LC50 Bluegill >100 mg/l (literature) Dicamba: 96-hr LC50 Bluegill = 135 mg/l 96-hr LC50 Rainbow Trout: 135 mg/l
Aquatic Invertebrate Acute Toxicity:	2,4-D Dimethylamine Salt: 48-hr EC50 Daphnia = 184 mg/l Mecoprop-p: 48-hr EC50 Daphnia >270 mg/l (literature) Dicamba: 48-hr EC50 Daphnia = 110 mg/l
Aquatic Plant Toxicity:	Mecoprop-p: 72-hr EC50 Green Algae >270 mg/l (literature)
Bird Acute and Prolonged Toxicity:	2,4-D Dimethylamine Salt: Bobwhite Quail Oral LD50 = 500 mg/kg Mallard Duck 8-day Dietary LC50 > 5,620 ppm Dicamba: Bobwhite Quail 8-day Dietary LC50 >10,000 ppm Mallard Duck 8-day Dietary LC50 >10,000 ppm
Honeybee Toxicity:	Not determined

ENVIRONMENTAL EFFECTS:

Soil Absorption/Mobility:	Dicamba poorly binds to soil particles, is potentially mobile in the soil and highly soluble in water.
Persistence and degradability:	In laboratory and field studies, 2,4-D DMA salt rapidly dissociated to parent acid in the environment. The typical half-life of the resultant 2,4-D acid ranged from a few days to a few weeks. Mecoprop-p DMA rapidly dissociates to parent mecoprop-p in the environment. In soil, mecoprop-p is microbially degraded with a typical half-life of approximately 11-15 days. Aerobic soil metabolism is the main degradative process for dicamba with a typical half-life of 2 weeks. Degradation is slower when low soil moisture limits microbe populations. In water, microbial degradation is the main route of dicamba dissipation. Aquatic hydrolysis, volatilization, adsorption to sediments, and bioconcentration are not expected to be significant.
Bioaccumulative Potential:	Not determined
Other adverse effects:	Not determined

SECTION 13: DISPOSAL CONSIDERATIONS

Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.

Container: Triple rinse and recycle the container or dispose of in accordance with Federal, state and local laws and regulations. See pesticide product label for full instructions on disposal.

RCRA Characteristics: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

SECTION 14: TRANSPORT INFORMATION

DOT: (Ground)	This product is not regulated by the U.S. Department of Transportation as a hazardous material for ground shipment in quantities of 41 gallons or less. For quantities of greater than 41 gallons: UN 3082, Environmentally hazardous substances, liquid, n.o.s. (2,4-D Salt), 9, III, RQ
IMDG: (Sea)	Not Determined
IATA: (Air)	Not Determined
TDG: (Canada)	Not Determined

SECTION 15: REGULATORY INFORMATION

TSCA Inventory: This product is exempt from TSCA inventory listing requirements as it is solely for FIFRA regulated use.

SARA Title III Information:

Section 302 - Extremely hazardous substances: None listed

Section 311/312 – Hazard Categories: Immediate (Acute); Delayed (Chronic)

Section 313 – The following chemicals are subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:

2,4-Dichlorophenoxyacetic acid (CAS # 94-75-7) 25.38% equivalent by weight in product

Mecoprop (CAS # 93-65-2) 6.75% equivalent by weight in product

Dicamba (CAS # 1918-00-9) 2.30% equivalent by weight in product

CERCLA - This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):

2,4-Dichlorophenoxyacetic acid has an RQ of 100 lbs which is met with 42 gallons of product.

Dicamba has an RQ of 1,000 lbs which is not met with any practical quantity of product.

EPA Registration Information: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

DANGER

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes, or on clothing.

California Proposition 65: This product does not contain any chemicals known to the state of California to cause cancer and/or reproductive harm.

U.S. State Worker and Community Right-To-Know (RTK) Information (CT, IL, MA, MN, NH, NJ, PA, RI):

Chemical Name

CAS #

State(s)

Not determined

Canadian Domestic Substances List: Not determined

WHMIS Classification: This product is not approved for use in Canada. WHMIS classification is not determined.

SECTION 16: OTHER

Disclaimer: The information presented herein is based on available data from reliable sources and is correct to the best of WinField Solutions' knowledge. WinField Solutions, LLC makes no warranty, express nor implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

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Sections Revised: All