NFPA HAZARD RATING

0	Least		
1	Slight	2	Health
2	Moderate	0	Flammability
3	High	0	Reactivity
4	Severe		

U.S. TRANSPORT SUMMARY

Regulated in quantities of 30 gallons or greater; see Section 14 for full information.

SECTION 1: IDENTIFICATION

Product Name: Brash® Herbicide
EPA Registration #: 1381-202
Product ID/Unity #: 10000730, 10109664, 10116907, 60317441, 60317499
Common Name: Mixture of Dicamba and 2,4-D
Chemical Description: Substituted benzonic acid (dicamba) and phenoxy (2,4-D) herbicide
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: Clear amber to light brown liquid with mild ammonia/amine like odor. Corrosive and severe eye irritant. Harmful if swallowed. May release toxic fumes if burned.

POTENTIAL HEALTH EFFECTS:
Eyes: Corrosive and severe eye irritant. May cause permanent eye injury, including blindness.
Skin: Contact may cause irritation. Prolonged or repeated exposure may lead to reddening of skin, rash, dermatitis, or other skin reactions. Harmful if absorbed through skin.
Inhalation: Low inhalation toxicity. Inhalation of mist may cause slight irritation of the upper respiratory tract.
Ingestion: May be harmful if swallowed.
Preexisting Conditions: Preexisting respiratory and dermal conditions may be aggravated by exposure.
Chronic Health Effects: See Section 11 for full information.

Carcinogenicity NTP: Not listed IARC: Chlorophenoxy Herbicides (Group 2B) OSHA: Not listed

OSHA HCS 2012 CLASSIFICATION: Eye Damage/Irritation Category 1; Acute Oral Toxicity Category 4; Acute Inhalation Toxicity Category 4; Specific Target Organ Toxicity – Repeated Exposure Category 2

SIGNAL WORD: DANGER

HAZARD STATEMENTS:
Causes serious eye damage.
Harmful if swallowed.
Harmful if inhaled.
May cause damage to organs (liver, kidney) through prolonged or repeated exposure.

Percent of product with unknown toxicity: 0%

PRECAUTIONARY STATEMENTS:
Prevention: Wear eye and face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe mist, vapors, or spray. Use only outdoors or in a well-ventilated area.

Continued on next page

Response:	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 Swallowed: Immediately call a poison control center (1-877-424-7452) or doctor for treatment advice. Rinse mouth. 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. 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. #
Dicamba DMA salt	12.4%	2300-66-5
2,4-D DMA salt	35.7%	2008-39-1

*Ingredients not specifically listed are non-hazardous and are considered to be confidential business information under 29 CFR 1910.1200(i).

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.
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 persists.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, water spray, foam, dry chemical, carbon dioxide (CO2)
Unsuitable Extinguishing Media: Water jet
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.
Hazardous Combustion Products: Toxic gases may be formed in a fire situation: hydrogen chloride and oxides of nitrogen
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: Keep spilled product from entering sewers or waterways.
Methods for Containment: Contain spilled product by diking area with sand or earth.
Methods for Clean-up: Cover contained spill with an inert absorbent material such as sand, vermiculite or other appropriate material. Do not use combustible materials such as sawdust. 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-D salts 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.
Storage: Store in secured, cool, dry areas designated specifically for pesticides, away from children, feed and food products and sources of heat. Keep containers closed when not in use. Store at temperatures between 35°F and 100°F. See pesticide product label for additional storage information.
Minimum Storage Temperature: 35°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
2,4-D	10 mg/m3	10 mg/m3	

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: Where airborne exposure to concentrations greater than the above listed exposure limits is likely, use a NIOSH approved respirator with cartridges/canisters approved for pesticides and organic vapors.

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 to prevent skin exposure.
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 long sleeve shirt, long pants and chemical resistant shoes 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 (H_2O=1):**	1.16 – 1.21
Vapor Pressure (mm Hg):	Not determined	**Density (lbs/gallon):**	9.68 – 10.10 lbs/gallon
Vapor Density (Air=1):	Not determined	**Melting Point/Freezing Point:**	Not determined
Solubility in Water (wt %):	Not determined	**Boiling Point/Range:**	Not determined
Viscosity:	Not determined	**pH (1% dispersion):**	8.0 – 10.0
Appearance and odor:	Clear amber to light brown liquid with mild ammonia/amine like odor	**Flash Point:**	Not applicable

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
Incompatible Materials: Oxidizing agents, acids and bases
Hazardous Decomposition Products: Thermal decomposition may release toxic gases such as hydrogen chloride, nitrogen oxides and carbon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Eye Effects:	Causes severe or corrosive damage. (rabbit)
Skin Effects:	Causes mild skin irritation (rabbit); LD50 >2,000 mg/kg (rat); Not a skin sensitizer
Acute Inhalation Effects:	LC50 >2.07 mg/L (rat)
Acute Oral Effects:	LD50 = 1,180 – 1,800 mg/kg
Specific Target Organ Toxicity:	Liver, kidney

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.
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 did not show carcinogenic potential. The U.S. EPA has given 2,4-D a Class D classification (not classifiable as to human carcinogenicity).
Mutagenicity:	There have been some positive and some negative studies, but the weight of evidence is that 2,4-D is not mutagenic.
Teratogenicity:	Studies in laboratory animals with 2,4-D have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals.
Reproductive Toxicity:	No components are known to have effects on the reproductive system.

POTENTIAL HEALTH EFFECTS:

Eyes: Corrosive and severe eye irritant. May cause permanent eye injury, including blindness.

Skin: Contact may cause irritation. Prolonged or repeated exposure may lead to reddening of skin, rash, dermatitis, or other skin reactions. Harmful if absorbed through skin.

Inhalation: Low inhalation toxicity. Inhalation of mist may cause slight irritation of the upper respiratory tract.

Ingestion: May be harmful if swallowed.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This product is toxic to fish and aquatic invertebrates. This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

ECOTOXICITY DATA:

Fish Acute and Prolonged Toxicity:	Bluegill 96-hr LC50: 2,4-D acid = 524 mg/L; Dicamba acid = 135 mg/L Rainbow Trout 96-hr LC50: 2,4-D acid = 250 mg/L; Dicamba acid = 135 mg/L
Aquatic Invertebrate Acute Toxicity:	Not available
Aquatic Plant Toxicity:	Not available
Bird Acute and Prolonged Toxicity:	Bobwhite Quail oral LD50: 2,4-D acid = 500 mg/kg; Dicamba acid = unknown Mallard Duck oral LD50: 2,4-D acid = unknown; Dicamba acid = 2,000 mg/kg Mallard Duck 8 day Dietary LC50: 2,4-D acid >5,500 mg/kg
Honeybee Toxicity:	Non-toxic

ENVIRONMENTAL EFFECTS:

Soil Absorption/Mobility:	Not available
Persistence and degradability:	Not available
Bioaccumulative Potential:	Not available
Other adverse effects:	Not available

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. DOT as a hazardous material for ground shipment in packages of less than 30 gallons. For packages with capacity of 30 gallons to 924 gallons: UN3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D salt), 9, PG III, RQ For packages with capacity of 925 gallons or greater: UN3082, Environmentally hazardous substance, liquid, n.o.s. (2,4-D salt, Dicamba), 9, PG 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:
Dicamba and 2,4-D acid

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-D has an RQ of 100 lbs reached with approximately 34 gallons of product
Dicamba has an RQ of 1000 lbs reached with approximately 925 gallons 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.
Do not get in eyes or on clothing.
Harmful if swallowed or absorbed through skin.
Avoid contact with skin.

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)
None listed		

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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