

NFPA HAZARD RATING				U.S. TRANSPORT SUMMARY	
0	Least				Regulated in quantities of 40 gallons or greater; see Section 14 for full information.
1	Slight	2	Health		
2	Moderate	0	Flammability		
3	High	0	Reactivity		
4	Severe				

SECTION 1: IDENTIFICATION	
Product Name:	Kochiavore™
EPA Registration #:	1381-258
Product ID/Unity #:	1613370
Common Name:	Mixture of Bromoxynil, 2,4-D and Fluroxypyr
Chemical Description:	Bromoxynil octanoate, Fluroxypyr-1-methylheptyl ester and 2,4-D 2-ethylhexyl ester
Recommended Uses:	Agricultural Herbicide. See product label for complete list of recommended uses and use site.
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: Transparent amber liquid with a moderate alcohol odor. Moderately irritating to eyes. Vapors and mist may cause irritation. Harmful if swallowed. Aspirational Hazard- the petroleum hydrocarbon component, if aspirated into the respiratory system during ingestion or vomiting may cause mild or severe pulmonary injury, possibly progressing to death.	
POTENTIAL HEALTH EFFECTS: Eyes: Moderately irritating to eyes. Skin: May cause slight skin irritation. Inhalation: Harmful if inhaled. Ingestion: Harmful if swallowed. Contains petroleum distillates. May be fatal if swallowed and enters airways. Preexisting Conditions: Preexisting respiratory and dermal conditions may be aggravated by exposure. Chronic Health Effects: Bromoxynil octanoate is a reproductive toxicant causing possible risk of congenital malformation in the fetus.	
Carcinogenicity	NTP: Naphthalene – Suspected human carcinogen IARC: Naphthalene, chlorophenoxy herbicides – Group 2B OSHA: Not listed
OSHA HCS 2012 CLASSIFICATION: Acute Oral Toxicity Category 4; Acute Inhalation Toxicity Category 4; Acute Eye Irritation Category 2B; Carcinogenicity Category 2; Reproductive Toxicant Category 2; Aspirational toxicant: Category 1; Specific Target Organ Toxicity Repeated Exposure: Category 2	
SIGNAL WORD: DANGER	
HAZARD STATEMENTS: May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if inhaled. Causes eye irritation. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.	
 	
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Percent of product with unknown toxicity: 0%

PRECAUTIONARY STATEMENTS:

Prevention: 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection and face protection.

Response: **If Swallowed:** Immediately call a poison control center (1-877-424-7452) or doctor for treatment advice. Do not induce vomiting. **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. If eye irritation persists: Get medical attention. **If exposed or concerned:** Get medical attention.

General Advice Get medical advice if you feel unwell.

Storage: Store locked up.

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

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	% (wt)	CAS Reg. #
Solvent naphtha (contains)	27.0 – 31.0%	64742-94-5
1-Methylnaphthalene	<8.0%	90-12-0
2-Methylnaphthalene	<13.0%	91-57-6
Naphthalene	<5.0%	91-20-3
2,4-D 2-ethylhexyl ester	25.93%	1928-43-4
Bromoxynil octanoate	25.13%	1689-99-2
Fluroxypyr 1-methylheptyl ester	10.00%	81406-37-3
*Ingredients not specifically listed are non-hazardous and/or 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 immediately.

Ingestion: Seek medical attention or call a poison control center immediately for treatment advice. **DO NOT** induce vomiting. 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 if irritation persists.

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: Contains petroleum distillates. May cause aspiration pneumonia hazard.

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: May produce gases such as hydrogen chloride, other chlorine compounds, hydrogen bromide and oxides of carbon and nitrogen.

Unusual Fire and Explosion Hazards: Closed containers may explode from vapor expansion in high heat.

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.

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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). 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 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 cool, dry areas away from children, feed and food products and sources of heat. Store in original container with lid tightly closed. Store locked up. Do not store in direct sunlight. **See pesticide product label for additional storage information.**
Minimum Storage Temperature: 10°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/m ³	10 mg/m ³	
Naphthalene	10 ppm or 50 mg/m ³ (TWA) 75 mg/m ³ or 15 ppm (STEL)	10 ppm (TWA) 15ppm (STEL)	
1-methylnaphthalene		0.5 ppm skin (TWA)	
2-methylnaphthalene		0.5 ppm skin (TWA)	

NOTE TO END USER: 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 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 (H₂O=1):	1.14 – 1.16 (typical)
Vapor Pressure (mm Hg):	Not determined	Density (lbs/gallon):	9.50 - 9.68 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):	3.5 – 4.5
Appearance and odor:	Transparent amber liquid with a moderate alcohol odor	Flash Point:	>230°F

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, bases and acids
Hazardous Decomposition Products: Under fire conditions, may produce gases such as hydrogen chloride, other chlorine compounds, hydrogen bromide and oxides of carbon and nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Acute Oral Effects: Rat LD₅₀ = 550 mg/kg
Acute Dermal: Rat LD₅₀ > 5,050 mg/kg.
Acute Inhalation Effects: Rat- 4-hr LC₅₀ > 2.14 mg/L (no mortality at highest dose tested)
Skin Irritation: Rabbit: Slightly irritating (PDII 0.7)
Skin Sensitization: Guinea Pig: Not a sensitizer.
Subchronic (Target Organ) Effects: Repeat 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 overexposure to bromoxynil may cause effects to liver, kidneys and central nervous system. Repeated overexposure to fluroxypyril may cause effects to bone marrow, kidney, liver and respiratory tract.
Carcinogenicity: The International Agency for Research on Cancer (IARC) lists chlorophenoxy herbicides as a class 2B carcinogen. The US EPA has given the chlorophenoxy Herbicides 2,4-D, 2,4-DP, MCPP, and MCPA a Class D classification (not classifiable as to human carcinogenicity.) More current 2,4-D lifetime feeding studies in rats and mice did not show carcinogenic effects and a recent World Health Organization (WHO) review of 2,4-D toxicology has concluded that 2,4-D is not a carcinogen. The hydrocarbon portion of the formulation may contain naphthalene which is listed by IARC as a class 2B and the U.S National Toxicology Program (NTP) as reasonably anticipated to be a human carcinogen.
Mutagenicity: None known
Teratogenicity: None known
Reproductive Toxicity: Bromoxynil is considered a developmental toxicant based on the results of developmental toxicity studies in rats and rabbits.

POTENTIAL HEALTH EFFECTS:

Eyes: Moderately irritating to eyes.
Skin: May cause slight skin irritation.
Inhalation: Harmful if inhaled.
Ingestion: Harmful if swallowed. The petroleum hydrocarbon component, if aspirated into the respiratory system during ingestion or vomiting may cause mild or severe pulmonary injury, possibly progressing to death.
Preexisting Conditions: Preexisting respiratory and dermal conditions may be aggravated by exposure.
Chronic Health Effects: Bromoxynil octanoate is a reproductive toxicant causing possible risk of congenital malformation in the fetus.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: No data has been generated but it is anticipated that this product is highly toxic to aquatic life.

ECOTOXICITY DATA:

Fish Acute and Prolonged Toxicity: Not available
Aquatic Invertebrate Acute Toxicity: Not available
Aquatic Plant Toxicity: Not available
Bird Acute and Prolonged Toxicity: Not available
Honeybee Toxicity: Not available
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: This product is not regulated by the U.S. DOT as a hazardous material for ground shipment in quantities of less than 40 gallons.
 For quantities of 40 gallons or more:
 UN3082, Environmentally hazardous substance, liquid, n.o.s., 9, PG III, RQ (2, 4-D ester)

IMDG: Not determined
(Sea)

IATA: Not determined
(Air)

TDG: Not determined
(Canada)

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-D 2-ethylhexyl ester (CAS No. 1928-43-4) 25.93%
 Bromoxynil octanoate (CAS No. 1689-99-2) 25.13%
 Naphthalene (CAS No. 91-20-3) <5.0%

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 40 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.
CAUTION
 Harmful if swallowed. Causes moderate eye irritation.
 Avoid contact with eyes, skin or clothing.
 Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
 Remove and wash contaminated clothing before reuse.

California Proposition 65: WARNING: This product contains a chemicals known to the state of California to cause cancer and/or reproductive harm.
State Information: Other state regulations may apply. Check individual state requirements.
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.

Date: August 30, 2016 **Supersedes document dated:** April 11, 2016
Section Revised: Section 14