WINFIELD® SOLUTIONS

Material Safety Data Sheet

FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:
CHEMTREC 1-800-424-9300

Section 1—Chemical Product and Company Identification

Product Name:	Carnivore™	EPA Reg. No.: 1381-249
Common Name:	Herbicide	
Chemical Description:	Mixture of MCPA, Bromoxynil octanoate and Fluroxypyr	

Manufacturer's Name:	Medical Emergency Telephone Number:
WINFIELD SOLUTIONS, LLC	**1-877-424-7452**
P. O. Box 64589	**MSDS Creation Date:** 06/01/2012
St. Paul, MN 55164-0589	Supersedes document dated 11/29/2011

Section 2—Hazards Identification

Emergency Overview: Light to dark amber colored liquid with an aromatic odor. Product may cause oxygen deficiency in confined spaces; follow all OSHA regulations pertaining to confined space entry. See health effects below.

CAUTION: Keep out of reach of children.

Route(s) of Entry: Eyes, Inhalation, and Skin contact.

Health Hazards (Acute and Chronic):

Inhalation: Low inhalation toxicity. Overexposure to petroleum hydrocarbon component may cause irritation to respiratory tract, headaches, anesthesia, drowsiness, unconsciousness and other central nervous system effects, possibly including death.

Eyes: Mildly irritating based on toxicity studies.

Skin: Slightly toxic and moderately irritating based on toxicity studies. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Ingestion: May be 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.

Medical Conditions Generally Aggravated by Exposure:

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

Section 3—Composition Information on Ingredients

Ingredient	% (wt)	CAS reg. #
2-methyl-4-chlorophenoxyacetic acid, isooctyl (2-ethylhexyl) ester	27.30%	29450-45-1
Octanoic acid ester of bromoxynil	25.48%	1689-99-2
Fluroxypyr, 1-Methylheptyl Ester	10.08%	81406-37-3
Other ingredients including:	37.14%	
Aromatic Solvent (may contain)		64742-94-5
Naphthalene		91-20-3
1-Methylnaphthalene		90-12-0
2-Methylnaphthalene		91-57-6

NFPA HAZARD RATING:			
0	Least		
1	Slight	**2**	**Health**
2	Moderate	**1**	**Flammability**
3	High	**0**	**Reactivity**
4	Severe		

Section 4—First Aid Measures

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Ingestion: Seek medical attention or call a poison control center immediately. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give any liquid to person. Do not give anything by mouth to an unconscious person.

Eyes: Hold eye open and rinse slowly and gently with water for 15 to 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: Remove contaminated clothing and wash before re-using. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

Note to Physician: May pose an aspiration pneumonia hazard. Contains petroleum distillate.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5—Fire and Explosion Hazard Data

Extinguishing Media: Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water layer.

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: 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

Small Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mists. Spills should be cleaned up immediately to prevent spreading.

Large Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mist. Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

Containment: Do not release into sewers or waterways. Dike spills to prevent contamination to water supplies. Contain spills and absorb liquids by covering with clay or other absorbent material. Vacuum, scoop, or sweep up waste and place in a container for disposal.

Section 7—Precautions for Safe Handling and Use

Precautions to Be Taken in Handling and Storage: Store above 10°F or warm and agitate before use. Store in dry areas away from children, feed and food products and sources of heat. Immediately clean up spills that occur during handling or storage. Keep containers closed when not in use. Avoid contact with eyes, skin or clothing during handling.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/Personal Protective Equipment (PPE) immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Other Precautions: Consult Local, State, and Federal regulations pertaining to storage and disposal.

Section 8—Control Measures/Personal Protection

Exposure Guidelines:

Naphthalene (CAS # 91-20-3) OSHA TWA = 10ppm; ACGIH TWA = 10ppm (skin); ACGIH STEL = 15ppm (skin)
1-Methylnaphthalene (CAS # 90-12-0) ACGIH TWA = 0.5ppm (skin)
2-Methylnaphthalene (CAS # 91-57-6) ACGIH TWA = 0.5ppm (skin)

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

Ventilation: **Local Exhaust:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred.

Note to End Users: See product label for full listing of Personal Protective Equipment (PPE) required when handling/applying this product.

Protective Gloves: Wear chemically protective gloves.
Eye Protection: Wear protective eyeglasses or chemical safety goggles. Contact lenses are not eye protective devices.
Other Protective Clothing or Equipment: Wear chemically protective boots, aprons, and gauntlets to prevent prolonged or repeated skin contact.
Work/Hygienic Practices: Never eat, drink, nor smoke in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9—Physical/Chemical Characteristics

Physical State:	Liquid	**Specific Gravity (H_2O=1):**	1.14 @ 20°C
Vapor Pressure (mm Hg):	Not determined	**Freezing Point:**	Not determined
Vapor Density (Air=1):	Not determined	**Boiling Point:**	Not determined
Solubility in Water (wt %):	Emulsifiable	**pH (1% solution):**	4 - 5
Appearance and odor:	Light to dark amber colored liquid with an aromatic odor.	**Flash Point:**	212°F (100°C) Pensky-Martens

Section 10—Reactivity Data

Stability: Product stable under normal storage and handling conditions.
Chemical Incompatibilities: Strong oxidizing agents, bases and acids.
Conditions to Avoid: Avoid excessive heat. Do not store near heat or flame.
Hazardous Decomposition Products: Under fire conditions may produce gases such as hydrogen chloride, other chlorine compounds, hydrogen bromide and oxides of carbon and nitrogen.
Hazardous Polymerization: Will not occur.

Section 11—Toxicological Information

Eye Effects:	Mildly irritating
Skin Effects:	LD50 > 5,000 mg/kg (rat); Moderately irritating; Sensitizer
Acute Inhalation Effects:	LC50 (4-hr) > 2.10 mg/L
Acute Oral Effects:	LD50 > 550 mg/kg (female rate)(estimated based on mortalities for doses tested)
Subchronic (Target Organ 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 overexposure to bromoxynil may cuase effects to liver, kidneys and central nervous system. Repeated overexposure to fluroxypyr may cause effects to bone marrow, kidney, liver and respiratory tract.
Reproductive Toxicity:	MCPA studies in laboratory animals have shown testicular effects and lower male fertility. Animal tests with bromoxynil have not demonstrated reproductive effects. In animal studies, fluroxypyr has been shown not to interfere with reproduction.
Developmental Toxicity:	MCPA studies in laboratory animals have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. Based upon the results of rat and rabbit teratogenicity studies, bromoxynil is considered to be a developmental toxicant. Women of childbearing age should be particularly careful when handling this product to avoid ingestion and skin contact. Fluroxypyr did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects in the mother.

Genotoxicity:	There have been some positive and some negative studies, but the weight of evidence is that MPCA is not mutagenic. There have been some positive and negative studies, but the weight of evidence is that bromoxynil is not mutagenic. Neither *in vitro* nor *in vivo* tests on bromoxynil octanoate demonstrated mutagenic effects. Animal tests with fluroxypyr did not demonstrate mutagenic effects.		
Carcinogenicity:	NTP: Yes (naphthalene)	IARC: 2B (Chlorophenoxy herbicides and naphthalene)	OSHA: No

Section 12—Ecological Information

Ecotoxicity:

Data on MPCA 2EHE:

96-hour LC50 Bluegill:	3.9 +/- 0.7 mg/L	Bobwhite Quail Dietary LC50:	>5,620 ppm
96-hour LC50 Rainbow Trout:	3.2 mg/L	Mallard Duck 8-day Dietary LC50:	>5,620 ppm
48-hour EC50 Daphnia:	0.28 mg/L		

Data on Bromoxynil Octanoate:

96-hour LC50 Bluegill:	0.53 mg/L	Bobwhite Quail Acute Oral LD50:	148 mg/kg
96-hour LC50 Rainbow Trout:	0.1 mg/L	Mallard Duck Acute Oral LD50:	2,050 mg/kg
48-hour EC50 Daphnia:	0.096 mg/L		

Date on Fluroxypry 1-Methylheptyl Ester:

Fluroxypyr 1-Methylheptyl Ester is highly toxic to aquatic invertebrates on an acute basis (LC50 or EC50 is between 0.1 and 1 mg/L). Concentrations for fish were not determined because they exceed water solubility. Fluroxypyr 1-Methylheptyl Ester is highly insoluble in water. Fluroxypyr 1-Methylheptyl Ester is practically non-toxic to birds on an acute and dietary basis (LD50 >2,000 mg/kg and LC50 >5,000 ppm).

Environmental Fate:

MCPA 2EHE is rapidly de-esterfied to parent MCPA acid in the environment. In soil, MCPA is microbially degraded with a typical half-life of approximately 10-14 days. Bromoxynil octanoate rapidly degrades to bromoxynil phenol. The typical half-life of bromoxynil phenol ranged from a few days to a few weeks. In laboratory and field studies, Fluroxypyr 1-Methylheptyl Ester rapidly de-esterfield to parent acid in the environment. The typical soil half-life for fluroxypyr (acid and ester) ranged from 1 to 4 weeks. Microbial metabolism is the primary degradation mechanism in soil. The typical aquaic half-life ranged from 4 to 14 days.

Section 13—Disposal Considerations

Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.
Container: Triple rinse (or equivalent) the empty containers. Then offer for recycling or reconditioning. See product label for detailed instructions on disposal.
RCRA characteristics: U165 – Naphthalene (CAS # 91-20-3)

Section 14—Transport Information

Quantities of less than 119 gallons are not regulated by U.S. DOT as a hazardous material.

Quantities of 119 gallons to 300 gallons:
UN 3082, Environmentally hazardous substance, liquid, n.o.s., (2-methyl-4-chlorophenoxyacetic acid, Bromoxynil octanoate), 9, III, MARINE POLLUTANT, RQ

Quantities greater than 300 gallons:
UN3082, Environmentally hazardous substance, liquid, n.o.s., (2-methyl-4-chlorophenoxyacetic acid, Bromoxynil octanoate), (Naphthalene), 9, III, MARINE POLLUTANT, RQ

Section 15—Regulatory Information

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Title III, Section 311/312:		Immediate:	**Yes**	Delayed:	**Yes**
Sudden Release of Pressure:	**No**	Fire:	**No**	Reactive:	**No**

SARA Title III, Section 313: Bromoxynil octanoate (CAS # 1689-99-2), 25.48% by weight in product
Naphthalene (CAS # 91-20-3), <3.5% by weight in product

CERCLA: Naphthalene (CAS # 91-20-3) 100 pounds

PROPOSITION 65: WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or reproductive harm.

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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