



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Scorch™
EPA Reg. No.: 71368-117
Product Type: Herbicide

Company Name: Nufarm Americas, Inc.
 11901 S. Austin Avenue
 Alsip, IL 60803
 1-800-345-3330

Telephone Numbers: For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident,
 Call CHEMTREC Day or Night: 1-800-424-9300
 For Medical Emergencies Only, Call 1-877-325-1840

This product is an EPA FIFRA registered pesticide. Some classifications on this SDS are not exactly the same as on the FIFRA label. Certain sections are superseded by federal law governed by EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

2. HAZARDS IDENTIFICATION

For EPA FIFRA-Specific Information see Section 15

HEALTH HAZARDS:

Acute Toxicity Oral	Category 4
Eye Damage	Category 1
Skin Irritation	Category 2
Skin Sensitizer	Category 1

ENVIRONMENTAL HAZARDS:

Hazardous to aquatic environment, acute	Category 1
Hazardous to aquatic environment, chronic	Category 1

SIGNAL WORD:

DANGER

HAZARD STATEMENTS:

Harmful if swallowed. Causes serious eye damage. Causes skin irritation. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.



PRECAUTIONARY STATEMENTS

Wash thoroughly after handling. Avoid breathing mist, vapors, or spray. Contaminated working clothing must not be allowed out of the workplace. Wear protective gloves, and eye and face protection. Do not eat, drink or smoke when using this product. Avoid release to the environment.

If swallowed: Call a poison center if you feel unwell. Rinse mouth. If on skin: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate call a poison center. Collect spillage.

Dispose of contents in accordance with local, state, and federal regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	% BY WEIGHT
2-ethylhexyl ester of 2,4-Dichlorophenoxyacetic Acid	1928-43-4	47.50 – 50.50
Dicamba (3,6-Dichloro-o-Anisic) Acid	1918-00-9	10.05 – 11.10
1-methylheptyl ester of Fluroxypyr	81406-37-3	11.00– 12.20
Other Ingredients	Trade Secret	Trade Secret

Synonyms: Mixture of 2,4-D Ethylhexyl Ester, Fluroxypyr methylheptyl ester, and Dicamba acid
 Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

If in Eyes: Hold eye open and immediately rinse slowly and gently with water for 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get immediate medical attention.

If Inhaled: Move person to fresh air. Call a poison control center or doctor for further treatment advice.

If Swallowed: Call a poison control center or doctor for treatment advice. Do not induce vomiting unless told to do so by the poison control center or doctor.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin with plenty of water. Call a poison control center or doctor for treatment advice.

Most Important symptoms/effects, acute and delayed: Causes severe eye irritation with possible eye damage. Causes skin irritation. May cause allergic skin reaction. May be harmful if swallowed.

Indication of Immediate medical attention and special treatment if needed, if necessary: Immediate medical attention is required for eye contact.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.

Special Fire Fighting Procedures: Firefighters should wear NIOSH 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 later.

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.

Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as oxides of carbon and nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Cleanup and Disposal: Avoid creation of dusty conditions. Scrape up and place in appropriate closed container. Wash entire spill area with a detergent slurry, absorb and sweep into container for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

HANDLING: Do not get in eyes or on clothing or skin. 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. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

STORAGE: Do not contaminate water, food, or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Eye/Face Protection: Not normally required. To avoid contact with eyes, wear chemical goggles or shielded safety glasses. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks and shoes. An emergency shower or water supply should be readily accessible to the work area.

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.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
2-ethylhexyl ester of 2,4-D	10*	NE	10 inhalable skin*	NE	mg/m ³
Fluroxypyr methylheptyl ester	NE	NE	NE	NE	
Dicamba Acid	NE	NE	NE	NE	
Other Ingredients					

*Based on adopted limit for 2,4-D

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light amber liquid
Odor:	Strong alcohol
Odor threshold:	No data available
pH:	2.33 (1% dispersion @ 25° C)
Melting point/freezing point:	No data available
Initial boiling point and boiling range	No data available

Flash point:	>231° F (110.6°C)
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	1.15 g/cm (@ 24° C); 1.13 g/cm (@ 38° C)
Solubility(ies):	No data available
Partition coefficient: n-octanol/water:	No data available
Autoignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	71.7 cPs (@ 24° C); 31.6 cSp (@ 38° C)

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.

Chemical Stability: This material is stable under normal handling and storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

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

Incompatible Materials: Strong oxidizing agents: bases and acids.

Hazardous Decomposition Products: Under fire conditions may produce gases such as hydrogen chloride and oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eye contact, Skin contact

Symptoms of Exposure:

Eye Contact: Causes serious eye irritation. Permanent eye damage is possible.

Skin Contact: Causes skin irritation. May cause allergic skin reaction (sensitization) with itching and hives.

Ingestion: Harmful if swallowed.

Inhalation: Low inhalation toxicity based on toxicity studies.

Delayed, immediate and chronic effects of exposure: Causes serious eye irritation and possible eye damage. Causes skin irritation. May cause allergic skin reaction. Harmful if swallowed.

Toxicological Data:

Data from laboratory studies conducted are summarized below:

Oral: Rat LD₅₀: 1098 mg/kg (female rats)

Dermal: Rat LD₅₀: >5,000 mg/kg

Inhalation: Rat 4-hr LC₅₀: >2.10 mg/L (No mortalities at the highest dose tested)

Eye Irritation: Rabbit: Severely Irritating (MMTS = 25.3)

Skin Irritation: Rabbit: Moderately Irritating (PDII = 3.2)

Skin Sensitization: Classified as a contact sensitizer following repeated skin exposure.

Subchronic (Target Organ) Effects: None known.

Carcinogenicity / Chronic Health Effects: None known.

Reproductive Toxicity: None of the ingredients are classified as reproductive toxins.

Developmental Toxicity: None of the ingredients are classified as developmental toxins.

Genotoxicity: None of the ingredients are classified as causing genetic defects.

Assessment Carcinogenicity: None of the ingredients are classified as carcinogens by IARC, NTP, or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Data on 2,4-D 2EHE:

96-hour LC ₅₀ Bluegill:	>5 mg/l	Bobwhite Quail Oral LD50:	>5,620 mg/kg
96-hour LC ₅₀ Rainbow Trout:	7.2 mg/l	Mallard Duck 8-day Dietary LC ₅₀ :	>5,620 ppm
48-hour EC ₅₀ Daphnia:	>5 mg/l	72-hour IC ₅₀ Algae:	0.23 mg/L

Data on Dicamba:

96-hour LC ₅₀ Bluegill:	135 mg/l	Bobwhite Quail 8-day Dietary LC ₅₀ :	>10,000 ppm
96-hour LC ₅₀ Rainbow Trout:	135 mg/l	Mallard Duck 8-day Dietary LC ₅₀ :	>10,000 ppm
48-hour EC ₅₀ Daphnia:	110 mg/l	48-hour Honey Bee Contact LD ₅₀ :	>100 µg/bee

Data on Fluroxypyr 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:

In laboratory and field studies, 2,4-D 2-ethylhexyl ester rapidly de-esterified 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. Dicamba poorly binds to soil particles, is potentially mobile in the soil and highly soluble in water. 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.

In laboratory and field studies, Fluroxypyr 1-Methylheptyl Ester rapidly de-esterified to parent acid in the environment. The typical soil half-life for fluroxypyr (acid and ester) ranged from one to four weeks. Microbial metabolism is the primary degradation mechanism in soil. The typical aquatic half-life ranged from 4 to 14 days.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide is a violation of Federal law.

Container Handling and Disposal: Nonrefillable Containers 5 Gallons or Less: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable Containers Larger than 5 Gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this

procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable Containers Larger than 5 Gallons: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

14. TRANSPORTATION INFORMATION

DOT

< 53 gallons per complete package

Non Regulated

≥ 53 but < 119 gallons per complete package

UN3082, Environmentally hazardous substance, liquid, n.o.s., (2,4-D Ester), 9, III, RQ

≥119 gallons per complete package

UN3082, Environmentally hazardous substance, liquid, n.o.s., (2,4-D Ester, FLUROXYPYR 1-METHYLHEPTYL ESTER), 9, III, RQ Marine Pollutant

IMDG

UN3082, Environmentally hazardous substance, liquid, n.o.s., (2,4-D Ester, FLUROXYPYR 1-METHYLHEPTYL ESTER), 9, III, Marine Pollutant

IATA

UN3082, Environmentally hazardous substance, liquid, n.o.s., (2,4-D Ester, FLUROXYPYR 1-METHYLHEPTYL ESTER), 9, III, Marine Pollutant

15. REGULATORY INFORMATION

EPA FIFRA INFORMATION

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

DANGER. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin or on clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

U.S. FEDERAL REGULATIONS

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

SARA Hazard Notification/Reporting:

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):

Acute Health

Section 313 Toxic Chemical(s):

2,4-D 2-ethylhexyl ester (CAS No. 1928-43-4) 47.50-50.50% by weight in product
Dicamba (CAS No. 1918-00-9), 10.05-11.10% equivalent by weight in product

Reportable Quantity (RQ) under U.S. CERCLA:

2,4-D 2-ethylhexyl ester (CAS No. 1928-43-4) 100 pounds
Dicamba (CAS No. 1918-00-9) 1,000 pounds

RCRA Waste Code:

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: Not Listed.

16. OTHER INFORMATION**National Fire Protection Association (NFPA) Hazard Rating:**

Rating for this product: Health: 3 Flammability: 1 Reactivity: 0

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Nufarm Americas Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Nufarm Americas Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS AND ALL SUCH WARRANTIES ARE HEREBY SPECIFICALLY DISCLAIMED.

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