



NFPA HAZARD RATING				U.S. TRANSPORT SUMMARY	
0	Least				Regulated in quantities of 2.5 gallons or greater; see Section 14 for full information.
1	Slight	2	Health		
2	Moderate	1	Flammability		
3	High	1	Reactivity		
4	Severe				

SECTION 1: IDENTIFICATION	
Product Name: Trust® Herbicide EPA Registration #: 1381-146 Product ID/Unity #: 10000742, 10013099, 10013108, 10051682, 10126649, 60318799 Common Name: Trifluralin herbicide Chemical Description: Trifluralin (α, α, α -trifluoro-2,6-dinitro-N, N-dipropyl-p-toluidine) 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.	MEDICAL EMERGENCY TELEPHONE NUMBER: 1-877-424-7452 (24hrs) Non-Emergency Business Inquiries: 1-855-494-6343 Mon – Fri 8am – 5pm (Central Standard Time)
Manufactured For: WINFIELD SOLUTIONS, LLC P. O. Box 64589 St. Paul, MN 55164-0589	
FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL: CHEMTREC 1-800-424-9300 (24 hours)	

SECTION 2: HAZARDS IDENTIFICATION	
EMERGENCY OVERVIEW: Orange liquid with solvent odor. May cause allergic skin reaction. Causes serious eye irritation. Aspiration hazard.	
POTENTIAL HEALTH EFFECTS: Eyes: Causes serious eye irritation. Skin: Brief and/or prolonged contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin. Skin contact may cause an allergic skin reaction. Inhalation: Low inhalation toxicity. Inhalation of mist may cause slight irritation of the upper respiratory tract. Ingestion: Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Preexisting Conditions: Skin contact may aggravate preexisting dermatitis. Chronic Health Effects: For trifluralin, effects have been reported in animals on the following organs: liver, kidney, blood. See Section 11 for additional information on chronic health effects.	
Carcinogenicity NTP: Suspected (Naphthalene) IARC: Group 2B (Naphthalene) OSHA: Not listed	
OSHA HCS 2012 CLASSIFICATION: Eye Irritation Category 2A; Skin Sensitization Category 1; Carcinogenicity Category 2; Aspiration Hazard Category 1	
SIGNAL WORD: DANGER	
HAZARD STATEMENTS: May be fatal if swallowed and enters airways. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of causing cancer.	
	
Percent of product with unknown toxicity: 0%	
<i>Continued on next page</i>	

PRECAUTIONARY STATEMENTS:

Prevention: 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. Avoid breathing mist or spray. Wash skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response: **If swallowed:** Immediately call a poison control center (1-877-424-7452) or doctor for treatment advice. Do NOT induce vomiting.
If on skin: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.
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.

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. #
Trifluralin	43.0%	1582-09-8
Naphthalene	7.0%	91-20-3
*Ingredients not specifically listed are non-hazardous and 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.

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 if irritation persists.

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

Note to Physician: This product contains an aromatic hydrocarbon and can be extremely harmful if swallowed. Aspiration of this product may produce a severe pneumonitis. Stomach lavage with a cuffed endotracheal tube in place and immediate administration of activated charcoal, 6 to 8 heaping teaspoonfuls with water, should be considered. Treatment is otherwise symptomatic and supportive.

SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water fog, fine water spray, foam, dry chemical, carbon dioxide (CO2)

Unsuitable Extinguishing Media: Water stream or jet as it may spread fire

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. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed.

Hazardous Combustion Products: Toxic gases may be formed in a fire situation. Carbon monoxide, nitrogen oxides, fluorinated hydrocarbons and carbon dioxide may form.

Unusual Fire and Explosion Hazards: Closed containers may explode from vapor expansion in high heat. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Dense smoke is produced when product burns.

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. 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 Trifluralin with a reportable quantity (RQ) of 10 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. Avoid freezing. See pesticide product label for additional storage information.

Minimum Storage Temperature: 40°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
Naphthalene (CAS #91-20-3)	50 mg/m ³ ; 10 ppm (TWA)	10 ppm (TWA) 15 ppm skin (STEL); (skin)	

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 organic vapors with a particulate pre-filter.

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):	1.117 <i>Literature</i>
Vapor Pressure (mm Hg):	Not determined	Density (lbs/gallon):	9.32 <i>Literature</i>
Vapor Density (Air=1):	Not determined	Melting Point/Freezing Point:	Not determined
Solubility in Water (wt %):	Emulsifiable	Boiling Point/Range:	Not determined
Viscosity:	Not determined	pH (aqueous 50/50):	5.0 <i>Literature</i>
Appearance and odor:	Orange liquid with solvent odor	Flash Point:	210°F (99°C)

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Toxic flammable gases can be released during decomposition.

Chemical Stability: Product is stable at ambient temperature and pressure, under normal storage and handling conditions. Unstable at elevated temperatures. Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

Possibility of Hazardous Reactions: Will not occur

Conditions to Avoid: Avoid high temperatures and static discharge

Incompatible Materials: Oxidizers

Hazardous Decomposition Products: Carbon monoxide, nitrogen oxides, fluorinated hydrocarbons and carbon dioxide may form.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (Similar product)

Eye Effects: Causes serious eye irritation

Skin Effects: LD50 >2,000 mg/kg (rat); Brief and/or prolonged contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin. Skin contact may cause an allergic reaction.

Acute Inhalation Effects: LC50 >7.74 mg/L (rat)(4 hr, aerosol); Low inhalation toxicity. Inhalation of mist may cause slight irritation of the upper respiratory tract.

Acute Oral Effects: LD50 >5,000 mg/kg (male rats); LD50 = 4,013 mg/kg (female rats); Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

Specific Target Organ Toxicity: For trifluralin, effects have been reported in animals on the following organs: liver, kidney, blood. For the solvent, effects in animals have been reported on the following organs: lung, gastrointestinal tract, thyroid, urinary tract. Dose levels producing these effects were many times higher than any dose levels expected from exposure to use.

Aspirational Hazard: Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

CHRONIC TOXICITY

Chronic Effects: No effects other than those presented in other sections known.

Carcinogenicity: Naphthalene is considered to be a suspected human carcinogen. For trifluralin, a low incidence of urinary tract tumors was seen in only 1 of 5 chronic studies with rats. Trifluralin is not anticipated to be a carcinogenic risk to man.

Mutagenicity: Animal and in vitro studies were predominately negative.

Teratogenicity: Trifluralin has been toxic to the fetus in laboratory animals at doses toxic to the mother.

Reproductive Toxicity: None known

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This pesticide is extremely toxic to freshwater, marine, and estuarine fish and aquatic invertebrates, including shrimp and oysters. Trifluralin is practically non-toxic to birds on an acute and dietary basis.

ECOTOXICITY DATA:

Fish Acute and Prolonged Toxicity: Trifluralin: Fathead minnow (*Pimephales promelas*) 96 hr LC50 = 0.094-0.205 mg/L
Bluegill (*Lepomis macrochirus*) 96 hr LC50 = 0.0084-0.40 mg/L
Rainbow trout (*Oncorhynchus mykiss*) 96 hr LC50 = 0.025 – 0.10 mg/L
Common carp (*Cyprinus carpio*) flow-through 96 hr LC50 = 0.089 mg/L

Aquatic Invertebrate Acute Toxicity: Trifluralin: *Daphnia magna* 24 hr, static EC50 = 0.13-0.56 mg/L
Mytilus edulis 48 hr static EC50 = 0.096 mg/L

Aquatic Plant Toxicity: Trifluralin: Green alga (*Pseudokirchneriella subcapitata*) biomass growth inhibition, 5 days = 0.67 mg/L

Bird Acute and Prolonged Toxicity: Trifluralin: Mallard (*Anas platyrhynchos*) dietary LC50 >5,000 ppm
Bobwhite quail (*Colinus virginianus*) oral LD50 >2,000 mg/kg

Honeybee Toxicity: Trifluralin: contact LD50 > 100 micrograms/bee; oral LD50 > 100 micrograms/bee

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ENVIRONMENTAL EFFECTS:

Soil Absorption/Mobility:	Trifluralin potential for mobility in soil is slight (Koc between 2000 and 5000)
Persistence and degradability:	Trifluralin is expected to biodegrade only very slowly (in the environment).
Bioaccumulative Potential:	None known
Other adverse effects:	None known

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 2.5 gallons.
(Ground) For quantities of 2.5 gallons to 152 gallons:
 UN3082, Environmentally hazardous substance, liquid, n.o.s. (trifluralin, naphthalene), 9, PG III, RQ (trifluralin)
 For quantities of 153 gallons or greater:
 UN3082, Environmentally hazardous substance, liquid, n.o.s. (trifluralin, naphthalene), 9, PG III, RQ (trifluralin, naphthalene)

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:

Trifluralin (CAS #1582-09-8) 43.0%; Naphthalene (CAS #91-20-3) 7.0%

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

Trifluralin (CAS #1582-09-8) has an RQ of 10 lbs reached with 2.5 gallons of product; Naphthalene (CAS #91-20-3) has an RQ of 100 lbs reached with 153 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

Causes moderate eye irritation.

Harmful if swallowed.

Avoid contact with skin, eyes or clothing.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. This product may cause skin sensitization reactions in some people.

California Proposition 65: WARNING: This product contains a chemical (naphthalene) known to the state of California to cause cancer and/or reproductive harm.

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

Chemical Name	CAS #	State(s)
Trifluralin	1582-09-8	MA, NJ, PA,
Naphthalene	91-20-3	IL, MN, NJ, PA, RI

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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