

PESTICIDE STANDARD WRITTEN NOTIFICATION

FOR SCHOOLS, DAY CARE PROGRAMS, AND SCHOOL-AGE CHILDCARE PROGRAMS

The school, day care center, and/or school-age childcare program is responsible for sending this standard written notification form to employees, pupils, parents etc. to insure that they receive this information at least 2 working days prior to any pesticide use.

It is recommended that the Pest Management Professional use this ready-to-copy standard written notification form for the purpose of providing pesticide use information to the school, day care center, and/or school-age childcare program. The Pest Management Professional should save this form for copying.

School: Westport Junior/Senior High School

Name of School, Day care center, and/or School age childcare program

Pest Management Company: Tru Green 20 Raffaele Rd., Plymouth, MA 02360
(Please Print) Name Address

Pest Management Professional: Keith Patterson #AL-0043865
(Please Print) License number

A. List the Approximate Dates on which the pesticide use shall commence and conclude

Beginning Date October 5, 2024

Ending Date October 5, 2024

B. Record the specific location of the anticipated pesticide use

Fertilization of all athletic playing fields

C. Pesticide Information (Pest Management Professional should be specific as is possible when listing product(s) to be used)

Pesticide Product Name	Pesticide Type	EPA Registration #	Description/Purpose of treatment and/or application
1. TCS Growstar Fert.	Herbicide	82757-6	Fertilization herbicide
2. Escalade 2 Herbicide	Herbicide	228-442	Fertilization herbicide
3.			

This standard written notification must be accompanied by the following 2 documents. These materials are available from the DAR web page www.mass.gov/agr. Follow the links to the Children's Protection page.

- Chemical Specific Fact Sheet(s)
- Consumer Information Bulletin for school, day care center, and/or school-age childcare program. 3RD Edition approved

SAFETY DATA SHEET
19-0-5 Nutrite Professional Turf Fertilizer
with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY UNDERTAKING

1.1 Product Identifier

Product name 19-0-5 Nutrite Professional Turf Fertilizer with 0.29%Barricade

1.2 Relevant use of the product

Applications Herbicide/Fertilizer combo

1.3 Manufacturer, Importer or Responsible Party

Name FERTI TECHNOLOGIES
Address 560, Chemin Rhéaume, C.P. 129
JOL 2J0
Saint-Michel, Québec, Canada
Telephone 450 454-7521
Contact email reg@fertitechno.com

1.4 Emergency phone number

Telephone USA National Capital Poison Center: 1 800 222 1222

2. HAZARDS IDENTIFICATION

2.1. The hazard classification of the chemical according to HCS 2012 (US-GHS)

Skin Irrit. 3	H316
Skin sens. Cat 1	H317
Eye Irrit. 2B	H320
STOT SE 3	H335
Carc. 1	H350
STOT RE 1	H372

2.2. Danger symbols



2.3. Signal word

Danger

2.4. Hazard statements

H316 Causes mild skin irritation.
H317 May cause an allergic skin reaction
H320 Causes eye irritation.
H335 May cause respiratory irritation.
H350 May cause cancer
H372 May cause damage to organs (lungs) through prolonged or repeated exposure if inhaled.

2.5. Precautionary statements

Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust.

SAFETY DATA SHEET

19-0-5 Nutrite Professional Turf Fertilizer with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

Response	<p>P264 Wash hands thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P405 Store locked up.</p>
Storage	
Disposal	P501 Dispose of contents/container according to local regulations.
2.6. Description of any hazards not otherwise classified	Not applicable.
2.7. % Ingredient(s) with unknown acute toxicity	Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name		CAS#	Concentration %
Calcium carbonate	Limestone 80-99%	1317-65-3	C = 48.70%
	Quartz (SiO ₂) (<1%)	14808-60-7	
Urea	Carbamide, Carbonyldiamide, Carbamidic Acid) (97.5% - 99.7%)	57-13-6	C = 41.3%
	Alkalinity as ammonia (150 ppm max)		
	Methylenediurea (0% - 2.5%)	13547-17-6	
	Bluret (0% -1.5%)	108-19-0	
Potash	Potassium chloride (95% - 99.5%)	7447-40-7	C = 8.0%
	Sodium chloride (0.3% - 3.7%)	7647-14-5	
	Calcium, magnesium and sulfates chlorides	Various	
Oil Dri	Montmorillonite (90% - 93%)	1302-78-9	C = 1.0%
	Quartz (7% - 10%)	14808-60-7	
Barricade Herbicide	Prodiamine (65%)	29091-21-2	C = 0.45%
	Inert Ingredients*	1332-58-7	
Mineral oil		8042-47-5	C = 0.55%

*The specific chemical identities and/or actual concentrations or actual concentration ranges for one or more listed components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(l).
 Note: The balance of the ingredients are not classified as hazardous or are below the concentration limit to be classified as hazardous, under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

SAFETY DATA SHEET
19-0-5 Nutrite Professional Turf Fertilizer
with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

4. FIRST AID MEASURES

4.1 First Aid measures after Inhalation

Following Inhalation Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided by a qualified operator. Get medical attention if Irritation develops and persists.

4.2 First Aid measures after Skin exposure

Following skin contact Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Get medical attention if Irritation develops and persists.

4.3 First Aid measures after Eye exposure

Following eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if Irritation develops and persists.

4.4 First Aid measures after Ingestion

Following Ingestion Induce vomiting, but only if victim is fully conscious. Never give anything by mouth to an unconscious person. Drink 1 or 2 glasses of water. Do not give milk or alcoholic beverages. Call a physician.

4.5 Most important symptoms and effects, both acute and delayed

INHALATION	Respiratory irritation.
SKIN	Skin irritation, redness,
EYES	Serious eye irritation including, scratching of the cornea, and tearing
INGESTION	If a large quantity has been ingested: Abdominal pain. Diarrhea. Nausea. Vomiting. May cause drowsiness and loss of coordination.

4.6 Indication of any immediate medical attention and special treatment needed

Notes to physician: Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable:

Use extinguishing agent suitable for type of surrounding fire. Avoid excessive water to minimize runoff. Prevent firefighter water from entering the environment.

Small fires: Water spray, foam, dry chemical or CO₂

Large fires: Water spray, fog or foam.

Unsuitable: Not applicable.

5.2 Special hazards arising from chemical or mixture during the fire

Container may rupture on heating. Cool closed containers exposed to fire with water spray. Do not allow run-off from firefighting to enter drains or water courses. Explosive reactions with oxidizing agents such as potassium chlorate and/or peroxides. In case of fire hazardous decomposition products may be produced such as:

- Sulphur oxides
- Ammonia
- Carbon monoxide
- Carbon dioxide (CO₂)

5.3 Special Protective Precautions or equipment for firefighters

In the event of fire and/or explosion do not breathe fumes. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

SAFETY DATA SHEET
19-0-5 Nutrite Professional Turf Fertilizer
with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment** Wear personal protective equipment.
- 6.2 Emergency procedures** Unprotected persons must be kept away.
Evacuate personnel to safe areas.
Provide adequate ventilation.
Avoid dust formation.
Avoid breathing dust.
Avoid contact with skin, eyes and clothing.
- 6.3 Methods and materials used for containment** Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
Do not let product enter drains.
- 6.4 Clean-up procedures** Use mechanical handling equipment.
Clean contaminated surface thoroughly.
Pick up and arrange disposal without creating dust.
Use a suitable vacuum cleaner.

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Handle with care.
Wear personal protective equipment.
Use only in well-ventilated areas.
Avoid dust formation.
Provide exhaust ventilation if dust is formed.
Dust must be extracted directly at the point of origin.
Avoid breathing dust.
Avoid contact with skin, eyes and clothing.
- 7.2 Conditions for safe storage** Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers should be protected against falling down.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Store away from incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ACGIH-Threshold Limit Value (TLV)

Exposure limit values of the components: Respirable crystalline silica dust: ACGIH TLV[®] = 0,025 mg/m³
Calcium carbonate: ACGIH TLV[®] = 10 mg/m³
Toluene: ACGIH TLV[®] = 20 ppm

8.2 OSHA-Permissible Exposure Limit (PEL)

Exposure limit values of the components:

Component / CAS	TLV, 8H (OSHA, PEL)
	mg/m ³
Quartz (SiO ₂) CAS N°: 14808-60-7	Total dust: 10 mg/m ³ / %SiO ₂ +2 (OSHA Z-3) Respirable: 5 mg/m ³ / %SiO ₂ +2 (OSHA Z-3)
Limestone CAS N°: 1317-65-3	Total dust: 15 mg/m ³ (OSHA Z-1) Respirable: 5 mg/m ³ (OSHA Z-1)

SAFETY DATA SHEET
19-0-5 Nutrite Professional Turf Fertilizer
with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

Particulates Not Otherwise Regulated (PNOR) :	Total dust: 15 mg/m ³ (OSHA Z-1) Respirable: 5 mg/m ³ (OSHA Z-1)
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8.3 Any other exposure limit used or recommended by chemical manufacturer

Non applicable

8.4 Engineering Controls

Provide exhaust ventilation if dust is formed. Dust must be extracted directly at the point of origin. Apply technical measures to comply with the occupational exposure limits.

8.5 Personal Protective Equipment

Hand protection: Gloves

Gloves must be inspected prior to use. Replace when worn.

Eye protection: Do not wear contact lenses.

Wear as appropriate: Safety glasses with side-shields

Body protection: Long sleeved clothing

Respiratory protection: A NIOSH approved air purifying respirator with a type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed if workplace conditions warrant a respirator use.

Hygiene measures: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use. Keep working clothes separately.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information of basic physical and chemical properties

Appearance (physical state, colour, etc.)	Multicolored granules, solid
Odour	Odourless
Odour threshold	Not applicable
pH	No data available
Melting point/freezing point;	No data available
Boiling point	Not applicable
Boiling Range	Not applicable
Flash point	No data available
Evaporation rate	Not applicable
Flammability	Not flammable

SAFETY DATA SHEET
19-0-5 Nutrite Professional Turf Fertilizer
with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

Upper/lower flammability or explosive limits	No data available
Oxidising properties	No data available
Vapour pressure	Not applicable
Vapour density	No data available
Density	69.7 lbs./ft ³
Solubility in water	Partially soluble
Other Solvents	No data available
Partition coefficient (n-octanol/water)	No data available
Auto Ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Not applicable

10. STABILITY AND REACTIVITY

10.1 Reactivity	Not reactive under normal storage and handling condition
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	Hazardous polymerization does not occur.
10.4 Conditions to avoid	Keep at temperatures below 5374 °F (190 °C)
10.5 Incompatible materials	Strong oxidizing agents, Chlorates and Hypochlorites
10.6 Hazardous decomposition products	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides, Hydrogen fluoride, Hydrogen chloride, Carbon monoxide, Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

11.1 Measures of Toxicity

Acute toxicity:

Ingredients:

Urea:

Acute toxicity: LD50 Oral (Rat): 8471 mg/kg

Calcium carbonate:

Acute toxicity: LC50 Oral (Rat): >5000 mg/kg

Limestone:

SAFETY DATA SHEET
19-0-5 Nutrite Professional Turf Fertilizer
with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

Acute toxicity: LD50 Oral (Rat): >5000 mg/kg

N-(n-butyl)-thiophosphoric triamide
Acute toxicity: LD50 Oral (Rat): > 2823 mg/kg

Skin corrosion/Irritation: May irritate skin through mechanical abrasion

Serious eye damage/Irritation: May cause serious eye irritation

Respiratory or skin sensitisation: No data available

11.2 Listed in IARC or considered carcinogen by NTP or OSHA Quartz (SiO₂)
CAS N°: 14808-60-7
Group 1 (IARC), Volume 68, 100C

Proflamline: Benign thyroid tumors (rat). None observed (mouse).

TARGET ORGANS: Proflamline: Prolonged or repeated overexposure may cause liver and thyroid effects.

11.3 Further Information This product contains prismatic tremolite (e.g., cleavage fragments) as an impurity. Sufficient exposure to respirable prismatic tremolite dust may cause serious lung problems.

12. ECOLOGICAL INFORMATION

12.1 Toxicity May be toxic to aquatic life. In sufficient quantity may deplete oxygen required by aquatic life. May cause eutrophication of ponds and lakes.

Proflamline:

Toxicity to fish :
LC50: 0.83 mg/L
Exposure time: 96 h
Species: *Oncorhynchus mykiss* (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates:
LC50: 0.66 mg/L (Exposure time: 48 h)
Species: *Daphnia magna*

Carbonate calcium:

Toxicity to fish :
LC50: > 10000 mg/l
Exposure time: 96 h
Species: *Oncorhynchus mykiss* (rainbow trout)

SAFETY DATA SHEET
19-0-5 Nutrite Professional Turf Fertilizer
with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

Toxicity to daphnia and other aquatic Invertebrates:
EC50: > 1000 mg/l (Exposure time: 48 h)
Species: Daphnia magna (Water flea)

Silica:

Toxicity to Algae and Crustacea
IC50: 440 mg/L (Exposure time: 72 Hours)
Species: Algae
EC50: 7600 mg/L (Exposure time: 48 Hours)

Species: Daphnia
No data available

12.2 Persistence and degradability

12.3 Bioaccumulative potential No data available

12.4 Mobility in soil No data available

12.5 Other adverse effects

May release ammonium ions that are toxic to fish. Un-ionized ammonia concentrations above 0.02 mg/l are considered toxic in fresh water. May release phosphates which will result in algae growth, increased turbidity, and depleted oxygen. At extremely high concentrations, this may be hazardous to fish or other marine organisms. Release to watercourses may cause effects downstream. Fish 96 hour LC50, OECD Guidelines 203 (rainbow trout): >86mg/L.

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods to employ

Recover or recycle if possible. Properly characterize all waste materials. Consult federal, state/provincial and local regulations regarding the proper disposal of this material. Prevent material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Empty containers should be taken to an approved waste handling site for recycling or disposal.

13.2 Description of appropriate disposal containers to use

No data available

13.3 Description of the physical and chemical properties that may affect disposal activities

No data available

13.4 Language discouraging sewage disposal.

No data available

13.5 Any special precautions for landfills or incineration activities

No data available

14. TRANSPORT INFORMATION

UN Number

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SAFETY DATA SHEET
19-0-5 Nutrite Professional Turf Fertilizer
with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

UN proper shipping name

Transport hazard classes

Packing group

Environmental hazards

Guidance On transport in bulk

Special precautions for user

15. REGULATORY INFORMATION

National and/or regional regulatory information of the chemical or mixtures

Inventories:

US. Toxic Substances Control Act: components listed

OSHA Hazards: Carcinogen

Clean Air Act: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

16. OTHER INFORMATION

Indications on the revision

First edition: 12/18/2019

Addition of all fields as required by regulation (US) HCS 1910.1200 [HCS 2012].

Update of the classification information and update of related sections accordingly.

Abbreviations and acronyms used

ACGIH: American conference of governmental and industrial hygienist

CAS N°.: Chemical Abstract Service Number

CFR: Code of Federal Regulations

EC50: Half maximal effective concentration

HCS: Hazard communication standard

LC50: Half maximal lethal concentration

LD50: Half maximal lethal dose

OSHA: Occupational safety and health administration

STOT SE: Specific target organ toxicity Single exposure

STOT RE: Specific target organ toxicity Repeated exposure

UN N°.: United Nations Number

Methods of evaluation for the classification of mixtures

The classification of the mixture was set based on the regulation (US) HCS 1910.1200 [HCS 2012].

Other information

This information is based on our present knowledge and is provided according to the relevant national regulations. This information is intended as a characterization of the product in order to provide guidance for

SAFETY DATA SHEET
19-0-5 Nutrite Professional Turf Fertilizer
with 0.29%Barricade

Version 1.0
Version Date
12/18/2019

the relevant safety issues. However, this document does not provide any warranty, expressed or implied, regarding the properties of the product.



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: ESCALADE 2 HERBICIDE
EPA Reg. No.: 228-442
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 the same as the FIFRA label. Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide. Please see Section 15. REGULATORY INFORMATION for explanation.

2. HAZARDS IDENTIFICATION

HEALTH HAZARDS:

Eye Irritation	Category 2A
Skin Irritation	Category 2
Acute toxicity, oral	Category 4
Specific target organ toxicity – Repeated exposure	Category 2

ENVIRONMENTAL HAZARDS:

Hazardous to aquatic environment, acute	Category 1
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SIGNAL WORD:

WARNING

HAZARD STATEMENTS:

Causes serious eye irritation. Harmful if swallowed. May cause damage to organs (liver, kidneys) through prolonged or repeated exposure. Very toxic to aquatic life.



PRECAUTIONARY STATEMENTS

Wash hands and exposed skin thoroughly after handling. Wear chemical resistant gloves. Wear face shield, chemical goggles or shielded safety glasses. Do not eat, drink or smoke when using this product. Do not breathe mist/vapors/spray.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if safe to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of water. Specific treatment: See Section 4 First Aid and product label instructions. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

IF SWALLOWED: Call a poison center or doctor if you feel unwell. Rinse mouth.

Get medical advice/attention if you feel unwell.

Avoid unintended release to the environment. Collect spillage

Dispose of contents/container in accordance with state and federal regulations. See Section 13 and product label for disposal instructions.

SAFETY DATA SHEET**ESCALADE 2 HERBICIDE****3. COMPOSITION / INFORMATION ON INGREDIENTS**

COMPONENT	CAS NO.	% BY WEIGHT
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	2008-39-1	38.3 – 40.7
1-Methylheptyl Ester of Fluroxypyr	81406-37-3	5.6 – 6.2
Dicamba (3,6-Dichloro-o-Anisic Acid)	1918-00-9	3.9 – 4.3
Solvent Naphtha (Petroleum), Heavy Aromatic	64742-94-5	5.9 – 6.5
Other Ingredients:	Trade Secret	Trade Secret

Synonyms: Mixture of 2,4-D DMA, Fluroxypyr MHE, and Dicamba
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 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.

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

If Inhaled: 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.

Most important symptoms/effects: Eye exposure may cause moderate irritation. Skin exposure may cause irritation.

Indication of immediate medical attention and special treatment if needed: There is no specific antidote if this product is ingested. Treat symptomatically.

5. FIRE FIGHTING MEASURES

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 later.

Unusual Fire and Explosion Hazards: If water is used to fight fire or cool containers, dike to prevent runoff contamination of municipal sewers and waterways.

Hazardous Decomposition Materials (Under Fire Conditions): May produce gases such as hydrogen chloride and 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: Pump any free liquid into an appropriate closed container. Collect washings 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. Avoid contact with 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. If pesticide gets on skin,

SAFETY DATA SHEET

ESCALADE 2 HERBICIDE

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.

STORAGE:

Always use original container to store pesticides in a secured warehouse or storage building. Store at temperatures above 25° F. Protect from freezing. If allowed to freeze, remix well before using. This does not alter the product. Containers should be opened in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed or other pesticides. 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.

Personal Protective Equipment:

Eye/Face Protection: To avoid contact with eyes, wear face shield, goggles or 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-sleeved shirt, long pants, shoes, socks and chemical-resistant gloves. When mixing or loading, cleaning up spills or equipment or otherwise expose to the concentrate also wear a chemical-resistant apron. 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	
DMA Salt of 2,4-D	10*	NE	10*	NE	mg/m ³
Fluroxypyr	NE	NE	NE	NE	
Dicamba	NE	NE	NE	NE	
Solvent Naphtha (Petroleum), Heavy Aromatic**	NE	NE	NE	NE	
Other Ingredients	NE	NE	NE	NE	

*Based on adopted limit for 2,4-D

NE = Not Established

** Manufacturer recommended limit of 100 mg/m³ total hydrocarbon vapor.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Amber colored liquid
Odor:	Mild amine odor
Odor threshold:	No data available
pH:	5.5 - 8
Melting point/freezing point:	25° F (-4° C)
Initial boiling point and boiling range	No data available
Flash point:	>230° F (>110° C) Setflash
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:	1.169 @ 25° C
Solubility(ies):	Soluble
Partition coefficient: n-octanol/water:	No data available
Autoignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	51.6 cPs @ 25° C

SAFETY DATA SHEET

ESCALADE 2 HERBICIDE

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: 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 and nitrogen.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eye contact, Skin contact

Symptoms of Exposure:

Eye Contact: Causes substantial but temporary eye damage. Vapors and mist may cause irritation.

Skin Contact: Slightly toxic and moderately irritating based on toxicity studies. Overexposure by skin absorption may cause symptoms similar to those for ingestion.

Ingestion: Slightly toxic if ingested based on toxicity studies. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation, weakness and central nervous system depression.

Inhalation: Low inhalation toxicity based on toxicity studies.

Delayed, immediate and chronic effects of exposure: Eye irritation

Toxicological Data:

Data from laboratory studies conducted on a similar, but not identical, formulation:

Oral: Rat LD₅₀: 1,750 mg/kg (female) (estimated based on mortalities for doses tested)

Dermal: Rat LD₅₀: >2,000 mg/kg

Inhalation: Rat 4-hr LC₅₀: >2.07 mg/L

Eye Irritation: Rabbit: Moderately irritating

Skin Irritation: Rabbit: Moderately irritating

Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.

Subchronic (Target Organ) Effects: Repeated overexposure may cause effects to liver, kidneys, blood chemistry, testes 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 / Chronic Health Effects: Various animal cancer tests have shown no reliably positive association between 2,4-D exposure and cancer. Epidemiology studies on herbicide use have been both positive and negative with the majority being negative. The U.S. EPA has given 2,4-D and dicamba a Class D classification (not classifiable as to human carcinogenicity). Fluroxypyr did not cause cancer in laboratory animals.

Reproductive Toxicity: No impairment of reproductive function attributable to 2,4-D have been noted in laboratory animal studies. In animal studies, fluroxypyr has been shown not to interfere with reproduction. Dicamba did not interfere with fertility in reproduction studies in laboratory animals.

Developmental Toxicity: 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. 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. Animal tests with dicamba have not demonstrated developmental effects.

Genotoxicity: There have been some positive and some negative studies, but the weight of evidence is that 2,4-D is not mutagenic. Animal tests with fluroxypyr and dicamba did not demonstrate mutagenic effects.

Assessment Carcinogenicity:

This product contains substances that are considered to be probable or suspected human carcinogens as follows:

Component	Regulatory Agency Listing As Carcinogen			
	ACGIH	IARC	NTP	OSHA
Chlorophenoxy Herbicides	No	2B	No	No
Dicamba	No	No	No	No
Fluroxypyr	No	No	No	No
Solvent Naphtha (Petroleum), Heavy Aromatic	No	No	No	No
Other Ingredients	No	No	No	No

12. ECOLOGICAL INFORMATION

Ecotoxicity:**Data on 2,4-D, Dimethylamine Salt:**

96-hour LC ₅₀ Bluegill:	524 mg/l	Bobwhite Quail Oral LD ₅₀ :	500 mg/kg
96-hour LC ₅₀ Rainbow Trout:	250 mg/l	Mallard Duck 8-day Dietary LC ₅₀ :	>5,620 ppm
48-hour EC ₅₀ Daphnia:	184 mg/l		

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).

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		

Environmental Fate:

In laboratory and field studies, 2,4-D DMA salt rapidly dissociated 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.

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.

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.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed, labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling and Disposal:

Nonrefillable Containers 5 Gallons or Less: Nonrefillable container. Do not reuse or refill this container. 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 recondition are 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

SAFETY DATA SHEET

ESCALADE 2 HERBICIDE

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.

Refillable Container: Refill this container with pesticide only. Do not reuse this container for any other purpose. Close all openings and replace all caps. Contact Nufarm's Customer Service Department at 1-800-345-3330 to arrange for return of the empty refillable container.

For Residential Use:

Container Handling: If empty - Do not reuse this container. Place in trash or offer for recycling if available. If partly filled - If product cannot be used as directed, call your local solid waste agency for disposal instructions. Never place unused product down any indoor (including toilet) or outdoor (including sewer) drain.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this SDS.

DOT

<30 gallons per completed package
Non Regulated

≥ 30 and < 119 gallons per complete package

UN 3082, Environmentally hazardous substance, liquid, n.o.s., (2,4-D Salt), 9, III, RQ

≥ 119 gallons per complete package

UN 3082, Environmentally hazardous substance, liquid, n.o.s., (2,4-D Salt), 9, III, RQ, Marine Pollutant

IMDG

UN 3082, Environmentally hazardous substance, liquid, n.o.s., (2,4-D Salt), 9, III, Marine Pollutant

IATA

Non regulated

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.

WARNING. Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through the skin. Do not get in eyes or on clothing. Avoid contact with skin.

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 370.66):
Immediate and Delayed

Section 313 Toxic Chemical(s):

Dicamba (CAS No. 1918-00-9), 3.9 -4.3% by weight in product

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

Dicamba (CAS No. 1918-00-9) 1,000 pounds

SAFETY DATA SHEET

ESCALADE 2 HERBICIDE

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: 2 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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