

# THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS



## Department of Agricultural Resources

251 Causeway Street, Suite 500, Boston, MA 02114  
617-626-1700 fax: 617-626-1850 www.mass.gov/agr



### THE ACT PROTECTING CHILDREN AND FAMILIES FROM HARMFUL PESTICIDES OF 2000

Massachusetts Pesticide Enforcement Consumer Information Bulletin FOR SCHOOLS, DAYCARE CENTERS AND SCHOOL AGE CHILD CARE PROGRAMS

The Massachusetts Pesticide Control Act requires parents, staff, and children to receive this Consumer Information bulletin whenever pesticide applications are being made on the property of your school, daycare center or school age child care program. This bulletin is being provided to you along with a Standard Written Notification form and a Pesticide Specific Factsheet.

#### **Why am I receiving this information and what should I do when I receive it?**

The purpose of the Standard Written Notification is to provide you with information about pesticide applications which are taking place on the property of your school, day care center or school age child care program. The bulletin provides information about precautions you can take to minimize exposure to any pesticides. The Pesticide Specific Factsheets provide information about the properties of the pesticides being used.

#### **Who applies pesticides in my school, daycare center or school age child care program?**

Commercial pest management professionals, facilities managers, grounds personnel or custodians. Regardless of the approach used, the person who applies the pesticides must have a current and valid Pesticide Bureau Applicator license. Check the standard written notification form for the applicator's license number.

#### **How do I know when pesticides are being applied?**

Employees, supervised children and their guardians must receive standard written notification at least two working days prior to the application of pesticides outdoors on the property. The standard written notification form, which accompanies this bulletin, includes:

- approximate dates when the application shall commence and conclude;
- specific location of the application;
- product name, type and EPA Registration number of the pesticide;
- a Pesticide Specific Fact Sheet;
- a description of the purpose of the application and
- this Consumer Information Bulletin

The notification must also be posted in a common area of the facility at least two working days before the outdoor application is to commence and at least 72 hours after the application. Treated areas will be posted with clear and conspicuous warning signs along the perimeter. This information will be supplied to the school by the licensed pesticide applicator.

**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:** Northampton High School

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

**Pest Management Company:** TruGreen 2160 Westover Rd  
 (Please Print) Name Address

**Pest Management Professional:** Paul Labonte 29859  
 (Please Print) License number

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

**Beginning Date** 4/18/19 **Ending Date** 4/18/19

**B. Record the specific location of the anticipated pesticide use**

All Athletic Fields in back of school

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

<b>Pesticide Product Name</b>	<b>Pesticide Type</b>	<b>EPA Registration #</b>	<b>Description/Purpose of treatment and/or application</b>
1. Fertilzer w/ Barricade	Herbicide	961-367	Crabgrass
2. Escalade 2	Herbicide	228-442	Clover, Dandelions and broadleaf weeds
3.			
4.			
5.			

This standard written notification must be accompanied by the following 2 documents. These materials are available from the MDAR web page [www.mass.gov/agr](http://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.



# MATERIAL SAFETY DATA SHEET #4309

Page 1 of 4

1301 East 9<sup>th</sup> Street, Suite 1300, Cleveland, OH 44114-1849  
**EMERGENCY PHONE:** LESCO: (800) 321-5325  
**CHEMTREC:** (800) 424-9300

**DATE ISSUED:** 12/8/09  
**SUPERSEDES:** 11/24/09

## I. PRODUCT IDENTIFICATION

**PRODUCT NAME:** LESCO Stonewall® Pre-emergence Herbicide plus Fertilizer; LESCO Stonewall® (0.20%, 0.29%, 0.43%, 0.68%, 2.0%) Plus Fertilizer; LESCO Barricade® (0.20%, 0.29%, 0.43%, 0.68%, 2.0%) Plus Fertilizer; LESCO Barricade® 0.28% Plus Fertilizer; LESCO Barricade® 0.38% Plus Fertilizer  
**Chemical Family:** Dinitroaniline Herbicide  
**Chemical Name/Synonyms:** N3,N3-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine

## II. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	%(by/wt.)	CAS #	PEL/TLV
Prodiamine	0.20% – 2.0%	29091-21-2	Not Established
Formulated with one or more of the following ingredients. Check specific product label.			
Urea	0 – 98	57-13-6	10 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> (resp)
Potassium Chloride	0 – 95	7447-40-7	10 mg/M <sup>3</sup>
Potassium Sulfate	0 – 95	7778-80-5	10 mg/M <sup>3</sup>
Monoammonium Phosphate	0 – 95	7722-76-1	15 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> TLV
Diammonium Phosphate	0 – 95	7783-28-0	15 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> (resp)
Ammonium Sulfate	0 – 95	7783-20-2	15 mg/M <sup>3</sup> (dust)
Calcium Carbonate	0 – 95	1317-65-3	15 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> (resp)
Sulfur	0 – 20	7704-34-9	5 ppm (SO <sub>2</sub> )
Iron Oxide	0 – 10	1309-37-1	15 mg/M <sup>3</sup> (dust)
Iron Sulfate	0 – 10	7720-78-7	15 mg/M <sup>3</sup> (dust)
Manganese Oxide	0 – 10	1317-35-7	15 mg/M <sup>3</sup> (dust)
Magnesium Sulfate	0 – 10	7487-88-9	15 mg/M <sup>3</sup> (dust)
Urea Formaldehyde	0 – 10	9011-05-6	Not Established
Sulfate of Potash-Magnesia	0 – 10	14977-37-8	Not Established
Magnesium Carbonate	0 – 10	39409-82-0	Not Established
Biosolids	0 – 10	Not Established	Not Established
Kaolin Clay	0 – 10	Not Established	15 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> (resp)
Sodium Sulfite	0 – <1	Not Established	Not Established

TLV of all chemicals and mixtures is 15 mg/M<sup>3</sup>; TWA is 10 mg/M<sup>3</sup>; Respirable dust TLV of 5mg/M<sup>3</sup>, unless otherwise indicated

## III. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Primary Route(s) of Entry: Eyes, Skin, Inhalation, Ingestion

**POTENTIAL HEALTH EFFECTS:** May cause mild irritation to skin and eyes. Ingestion of large amounts may cause gastrointestinal disorder, nausea, vomiting and/or diarrhea.

**EYE:** May cause mild irritation

**SKIN:** Prolonged or frequently repeated skin contact may cause allergic reactions to some individuals.

**INHALATION:** Dust may be irritating to nose, respiratory tract and throat

**INGESTION:** Ingestion may result in rapid onset of abdominal pain, nausea, diarrhea, blurred vision, sweating, salivation, muscle twitching, and tremors.

**MEDICAL CONDITIONS AGGRAVATED:** Pre-existing respiratory, skin, or eye conditions

**POTENTIAL ENVIRONMENTAL HAZARDS:** This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of water solubility, it may be toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

### IV. FIRST AID MEASURES

**EYES:** Flush with large amounts of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

**SKIN:** Remove contaminated clothing. Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists.

**INHALATION:** If symptoms develop, remove person from source of exposure to fresh air. If breathing is difficult, administer oxygen if available. Get medical attention if irritation persists.

**INGESTION:** Give 1 or 2 glasses of water. Induce vomiting by touching back of throat with finger. Do not give anything by mouth to an unconscious person. Seek medical attention.

**NOTES TO MEDICAL DOCTOR:** Treat symptomatically

### V. FIRE FIGHTING MEASURES

**Flash Point (Method Used):** Not Applicable

**Lower Explosion Limits:** Not Applicable

**NFPA/HMIS Rating: Health:** 2

**EXTINGUISHING MEDIA:**

<input checked="" type="checkbox"/>	Foam
<input checked="" type="checkbox"/>	Water Spray

**Auto Ignition Temperature:** Not Applicable

**Upper Explosion Limits:** Not Applicable

**Fire:** 1                      **Reactivity:** 0

<input type="checkbox"/>	Alcohol Foam	<input checked="" type="checkbox"/>	Dry Chemical
<input checked="" type="checkbox"/>	Use media suitable for surrounding fire	<input checked="" type="checkbox"/>	CO <sub>2</sub>

**EXPLOSION HAZARDS:** Dispersion of fine dust in the air may form an explosive mixture.

**FIRE FIGHTING PROCEDURES:** Wear NIOSH approved positive pressure, self-contained breathing apparatus. Do not breathe fumes. Remove from area of fire at first opportunity. Prevent water runoff from entering drains, sewers or water sources. Fertilizer will become slippery when wet Guard against falls.

**HAZARDOUS COMBUSTION PRODUCTS:** If heated to decomposition, will give off toxic fumes of ammonia and formaldehyde. Under fire conditions, urea may decompose to cyanuric acid, biuret or ammonia. Thermal decomposition product may also include, but are not limited to, oxides of nitrogen, hydrogen fluoride and carbon monoxide

### VI. ACCIDENTAL RELEASE MEASURES

**RELEASE NOTES:** If material is spilled, sweep up, keeping dust to a minimum and store for re-use. Contaminated product and/or environmental media should be recovered and disposed of properly. Avoid breathing the dust.

### VII. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Read product label before handling. Use only as directed on the label. Do not contaminate water, food, or feed by storage or disposal. Store in original container away from other fertilizer, feed, or food stuffs and separated from other pesticides and away from drains, sewers, and water sources. Do not contaminate water source from disposal of equipment washwater. Do not eat, drink, or smoke while handling this product.

**OTHER PRECAUTIONS:** Keep out of reach of children. Avoid contact with eyes, skin and clothing. Wash thoroughly after using.

### VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Local exhaust ventilation recommended. Applicators should stand upwind when handling.

**PERSONAL PROTECTION EQUIPMENT:**

**EYES AND FACE:** Safety glasses with side shields, goggles, or face shield are required

**RESPIRATORY:** NIOSH/MSHA approved respiratory protection

**GLOVES:** PVC gloves recommended

**PROTECTIVE CLOTHING:** Long-sleeved shirt and long pants, shoes plus socks

**WORK HYGENIC PRACTICES:** Practice good care and good safety precautions when handling this product.

**IX. PHYSICAL AND CHEMICAL PROPERTIES**

**BOILING POINT:** Not Applicable

**MELTING POINT:** Not Applicable

**VAPOR DENSITY (air = 1):** Not Applicable

**ODOR:** Bland odor

**APPEARANCE:** Multi-colored granules

**pH:** Not Determined

**SPECIFIC GRAVITY:** Not Applicable

**EVAPORATION RATE:** Not Applicable

**VAPOR PRESSURE:** Not Applicable

**SOLUBILITY IN WATER:** Partially soluble

**PERCENT VOLATILE:** Not Applicable

**BULK DENSITY (lbs./cu ft):** 56 - 60

**X. STABILITY AND REACTIVITY**

**CONDITIONS TO AVOID:** Oxidizing agents; thermal, mechanical and electrical ignition sources

**STABILITY:** Stable

**POLYMERIZATION:** Will not occur

**INCOMPATIBLE MATERIALS:** Strong acids, alkalis

**HAZARDOUS DECOMPOSITION PRODUCTS:** If heated to decomposition, may give off ammonia and formaldehyde as well as oxides of sulfur, manganese, magnesium, iron, potassium and phosphorus, nitrogen, carbon, and chlorine. Urea can yield cyanuric acid or biuret upon heating.

**XI. TOXICOLOGICAL INFORMATION**

**EYE EFFECTS:** (Rabbit): Mildly irritating (AI)

**SKIN EFFECTS:** (Rabbit): Non-irritating (AI)

**DERMAL LC<sub>50</sub>:** (Rat): >2000 mg/kg body weight (AI)

**ORAL LD<sub>50</sub>:** (Rat): >5000 mg/kg body weight (AI)

**INHALATION LC<sub>50</sub>:** (Rat): >1.8 mg/l air – 4 hours (AI)

**SENSITIZATION:** (Guinea Pig): Sensitizing (AI)

**ACUTE EFFECTS FROM OVEREXPOSURE:** Eye irritation, possible skin sensitization

**CHRONIC EFFECTS FROM OVEREXPOSURE:** Prodiamine: (AI)

**Reproductive Hazard Potential:** Fetal toxicity at high dose levels (rats); developmental and maternal toxicity observed at 1 g/kg/day.

**Chronic/Subchronic Toxicity Studies:** Liver (alteration and enlargement) and thyroid effects (hormone imbalances) at high dose levels (rats); decreased body weight gains

**CARCINOGENICITY:** Prodiamine: (AI)

**Potential:** Benign thyroid tumors (rat). None observed (mouse)

**IARC:** Sodium Sulfite, Group 3

**NTP:** Not Listed

**OSHA:** Not Listed

**OTHER:** Not Listed

**XII. ECOLOGICAL INFORMATION**

**ENVIRONMENTAL DATA:** No data available for the formulation. The information presented here is for the active ingredient, Prodiamine: (AI)

Stable in sterile water, in the dark at pH 5,7 and 9, but degrades rapidly in the light, in both water (t<sub>1/2</sub> = 0.33 hr @ pH 5.5) and soil (t<sub>1/2</sub> – 50 hr). Degradation in soil, in the dark is variable under aerobic conditions (t<sub>1/2</sub> ~ 57 – 218 d), more rapid under anaerobic conditions (t<sub>1/2</sub> ~ 30 d). Immobile in various soils (Koc >9000). Bioaccumulation is high (BCF = 1300X, whole fish).

**ECOTOXICOLOGICAL INFORMATION:** No data

**XIII. DISPOSAL CONSIDERATIONS**



# MATERIAL SAFETY DATA SHEET #4309

Page 4 of 4

## DISPOSAL METHODS:

**Product:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container:** Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill, or at an incineration facility, or, if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

---

## XIV. TRANSPORTATION INFORMATION:

---

**DOT Transportation:** Not Regulated  
**Proper Shipping Name:** Not Applicable  
**Hazard Class:** Not Applicable  
**U.S. Surface Freight Class:** Herbicides, NOI  
**Reportable Quantity (RQ):** Not Applicable

**ID NO.:** Not Applicable  
**Marine Pollution #1:** Not Applicable  
**HM 181 Shipping Name:** Not Regulated

---

## XV. REGULATORY INFORMATION – UNITED STATES

---

### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

Y Immediate (Acute Health)

N Delayed (Chronic Health)

N Fire

N Sudden Release of Pressure

N Reactivity

**SEC 302:** Not Applicable

**SEC 304:** Not Applicable

**SEC 313:** Not Applicable

**CERCLA RQ:** Iron Sulfate (7720-78-7) 1,000

**CAA RQ:** Not Applicable

**EPA Registration No.:** 10404-88 (0.20%); 10404-89 (0.43%); 10404-90 (0.68%); 10404-91 (2.0%); 60063-28-10404 (0.29%); 100-1338-10404 (0.28%); 100-1339-10404 (0.38%)

Preparation and distribution of this Material Safety Data Sheet is done for LESCO, Inc., pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

The information contained herein is based on available data. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof; and you should make your investigation to determine safety for the use you contemplate. LESCO makes no warranty of merchantability of fitness for a particular use, nor is there any other express or implied warranty except as may be specifically provided otherwise on product.

LESCO, Inc. assumes no responsibility or liability for any incidental or consequential damages whether related to personal injury or property damage, to vendees, users or third parties, caused by the material and LESCO's responsibility is limited to replacement of, or repayment of, the purchase price for the material(s) with respect to which any damages are claimed. All vendees or users assume all risk associated with the use of the material(s).

For further information, contact: LESCO, Inc. • 1301 East 9<sup>th</sup> Street, Suite 1300 • Cleveland, OH 44114-1849 or (800) 321-5325.



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.

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Escalade<sup>2</sup><sub>TM</sub>  
**Synonyms:** Herbicide Mixture of 2,4-D, Fluroxypyr and Dicamba  
**EPA Reg. No.:** 228-442

**Company Name:** Nufarm Americas Inc.  
 1333 Burr Ridge Parkway, Suite 125A  
 Burr Ridge, IL 60527

**Date of Issue:** July 15, 2005      **Supersedes:** June 17, 2005  
**Sections Revised:** 1, 2 and 9

### 2. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance and Odor:** Amber colored liquid with an amine odor.

**Warning Statements:** Keep out of reach of children. WARNING. Avoid contact on skin, eyes or clothing. Causes substantial but temporary eye injury. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin or on clothing.

**Potential Health Effects:**

**Likely Routes of Exposure:** Inhalation, eye and skin contact

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

**Skin Contact:** Moderately irritating. Overexposure by skin absorption may cause symptoms similar to those for ingestion.

**Ingestion:** Harmful if swallowed. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation, weakness and central nervous system depression.

**Inhalation:** Low inhalation toxicity.

**Medical Conditions 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.

See Section 11: TOXICOLOGICAL INFORMATION for more information

**Potential Environmental Effects:**

This product is toxic to fish. Drift or runoff from treated areas may be hazardous to aquatic organisms and non-target plants.

See Section 12: ECOLOGICAL INFORMATION for more information

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	2008-39-1	39.53
1-Methylheptyl Ester of Fluroxypyr	81406-37-3	5.90
Dicamba (3,6-Dichloro-o-Anisic Acid)	1918-00-9	4.10
Other Ingredients Including:		50.47
Aromatic Solvent	64742-94-5	
(Contains Naphthalene)	91-20-3	

**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:** 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.

**5. FIRE FIGHTING MEASURES**

**Flash Point:** >230°F (>110°C) Setofflash

**Autoignition Temperature:** Not determined

**Flammability Limits:** Not determined

**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, 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 hydrogen chloride, nitrogen oxides, and carbon oxides.

**National Fire Protection Association (NFPA) Hazard Rating:**

**Rating for this product:** Health: 2    Flammability: 1    Reactivity: 1

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

**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 Clean-Up 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:**

Avoid contact with skin, eyes or clothing. Do not get in eyes, on skin or on clothing. Users should wash hands, face, and arms with soap and water before eating, smoking, chewing gum, using tobacco or using the toilet. Remove clothing 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.

If the container is over one gallon and less than five gallons, then persons engaged in open pouring of the product must also wear coveralls or a chemical-resistant apron. If the container is five gallons or more in capacity, do not open pour product from the container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of the container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.

**Storage:**

Always use original container to store pesticides in a secured warehouse or storage building. Protect from freezing. Store at temperatures above 25°F. If allowed to freeze, remix 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 with front, brow and temple protection. An emergency eyewash should be readily accessible to the work area.

**Skin Protection:** To avoid contact with skin, wear long pants, long-sleeved shirt, socks, shoes and chemical-resistant gloves. When open pouring the product, also wear coveralls or a chemical-resistant apron. An emergency shower 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 <sup>3</sup>
Fluroxypyr	NE	NE	NE	NE	
Dicamba	NE	NE	NE	NE	
Naphthalene	10	NE	10 (Skin)	15 (Skin)	ppm

\*Based on adopted limit for 2,4-D

NE = Not Established

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance and Odor:** Amber colored liquid with an amine odor.

**Boiling Point:** Not determined                      **Solubility in Water:** Soluble

**Density:** 9.74 pounds/gallon                      **Specific Gravity:** 1.169

**Evaporation Rate:** Not determined                      **Vapor Density:** Not determined

**Freezing Point:** 25°F (4°C)                      **Vapor Pressure:** Not determined

**MATERIAL SAFETY DATA SHEET**Escalade<sup>2</sup>

pH: 5.9 (1% solution)

Viscosity: 51.6 cps @ 25°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.

<b>10. STABILITY AND REACTIVITY</b>
-------------------------------------

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

**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, nitrogen oxides, and carbon oxides.

**Hazardous Reactions:** Hazardous polymerization will not occur.

<b>11. TOXICOLOGICAL INFORMATION</b>
--------------------------------------

**Toxicological Data:**

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

**Oral:** Rat LD<sub>50</sub>: 1, 750 mg/kg (female); FIFRA Category III

**Dermal:** Rats LD<sub>50</sub>: >2,000 and <5,000 mg/g; FIFRA Category III

**Inhalation:** Rat 4-hr LC<sub>50</sub>: >2.07 mg/L; FIFRA Category IV

**Eye Irritation:** Rabbits (3): Moderately irritating; FIFRA Category II

**Skin Irritation:** Rabbits (3): Moderately irritating; FIFRA Category III

**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:** The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, more current 2,4-D lifetime feeding studies in rats and mice did not show carcinogenic potential. 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. The hydrocarbon component may contain naphthalene, which is listed by IARC as a class 2B and the U.S. National Toxicology Program as reasonably anticipated to be a human carcinogen.

**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
Naphthalene	No	2B	Yes*	No

\*Reasonably anticipated to be a human carcinogen

See Section 2: HAZARDOUS IDENTIFICATION for more information.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity:

#### Data on 2,4-D Dimethylamine Salt

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

#### \*Data on Fluroxypyr 1-Methylheptyl Ester:

Acute LC <sub>50</sub> Blue Gill: above water solubility	Bobwhite Quail Acute Oral LD <sub>50</sub> :	>2,000 mg/kg
Acute LC <sub>50</sub> Rainbow Trout: above water solubility	Mallard Duck Acute Oral LC <sub>50</sub> :	>2,000 mg/kg
Acute Immobilization EC 50 Daphnia Magna: >499 µg/L		

\*Fluroxypyr 1-Methylheptyl Ester is highly insoluble in water.

#### Data on Dicamba

96-hour LC <sub>50</sub> Bluegill:	135 mg/l	Bobwhite Quail 8 day Dietary LC <sub>50</sub> :	>10,000 ppm
96-hour LC <sub>50</sub> Rainbow Trout:	135 mg/l	Mallard Duck 8 day Dietary LC <sub>50</sub> :	>10,000 ppm
48 hour EC <sub>50</sub> 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. Fluroxypyr has a hydrolysis half-life of 12.8 to 16.5 hours. Under aerobic and anaerobic soil conditions the half-life for Fluroxypyr is 7 days. Dicamba has low bioaccumulation potential, is not persistent in soil, is highly mobile in soil and degrades rapidly.

## 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:

**Plastic Bottles and Non-Returnable Plastic Drums:** Triple rinse (or equivalent). 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.

**Returnable/Refillable Containers:** Close all openings and replace all caps. Contact Nufarm Customer Service at 1-800-345-3330, to arrange for return of the empty refillable container.

## 14. TRANSPORTATION INFORMATION

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

For Department of Transportation (DOT) regulatory information, if required, consult transportation regulations, product-shipping papers or call Nufarm's DOT Manager at 708-755-2104, Monday through Friday, 8:00 AM to 5:00 PM Central Time.

**15. REGULATORY INFORMATION****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):**

Immediate, Delayed

**Section 313 Toxic Chemical(s):**

Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7), 32.83% equivalent by weight in product

Dicamba (CAS No. 1918-00-9), 4.10% by weight in product

Naphthalene (CAS No. 91-20-3), 0.77% by weight in product

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

Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7) 100 pounds

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

Naphthalene (CAS No. 91-20-3) 100 pounds

**RCRA Waste Code:**

Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7) U240

Naphthalene (CAS No. 91-20-3) U165

**State Information:**

Other state regulations may apply. Check individual state requirements.

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

**16. OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS 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 or of 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.

Escalade is a trademark of Nufarm Americas Inc.

Riverdale is a registered trademark of Nufarm Americas Inc.