

# MATERIAL SAFETY DATA SHEET

Manufactured By: ENVIRONMENTAL BIOCONTROL INTERNATIONAL  
A Division of DCV, Inc.  
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WILMINGTON, DE 19810  
302-695-5781 OR 800-468-6324

CHEMTREC® Emergency Telephone Numbers:  
United States: (800)424-9300  
International: (202)483-7616 (Collect)

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**I. CHEMICAL PRODUCT/COMPANY IDENTIFICATION**

PRODUCT NAME: FLIGHT CONTROL®  
PRODUCT CODE: 062488

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**II. COMPOSITION: INFORMATION ON INGREDIENTS**

CHEMICAL NAME: \* 50% 9,10 Anthraquinone  
50% Inert Ingredients

\* All percentages are approximate.

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**III. HAZARDS IDENTIFICATION**

This product contains no ingredients listed or defined as hazardous under the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**HUMAN HEALTH DATA**

ROUTE(S) OF ENTRY: Skin contact; Eye contact

**HUMAN EFFECTS AND**

SYMPTOMS OF OVEREXPOSURE: (This data is based on active ingredient)

ACUTE SKIN CONTACT: On the basis of animal toxicity testing (see Section XI), we expect this product to be non-irritating to the skin.  
ACUTE EYE CONTACT: On the basis of animal toxicity testing (see Section XI), we expect this product to be non-irritating to the eyes.  
ACUTE INGESTION: Ingestion may cause a laxative effect and produce a greenish or bluish colored urine. On the basis of animal toxicity testing (see Section XI), we expect this product to be essentially non-toxic by ingestion.

**CHRONIC EFFECTS  
OF EXPOSURE:**

No applicable information was found concerning any adverse chronic health effects to humans resulting from long-term repeated overexposure to this product.

**CARCINOGENICITY:**

None of the components listed by NTP, IARC, or regulated as a carcinogen by OSHA.

**MEDICAL CONDITIONS:**

AGGRAVATED EXPOSURE: None known.

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**IV. FIRST AID MEASURES**

FIRST AID FOR EYES: Immediately flush eyes with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15-20 minutes). Get medical attention.

FIRST AID FOR SKIN: In case of contact, remove product mechanically and wash skin with soap or mild detergent and water. Remove contaminated clothing. Call a physician if irritation occurs. Wash clothing before reuse.

FIRST AID FOR INGESTION: If swallowed, call a physician immediately.  
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## V. FIRE AND EXPLOSION DATA

FIRE & EXPLOSION HAZARDS: Minimal  
 EXTINGUISHING MEDIA: Water Spray. Foam. Dry Chemical. CO2. Halon  
 SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus. Wear full protective equipment. Use water spray. Cool tank/container with water spray.

If area is heavily exposed to fire and if conditions permit, let fire burn itself out, since water may increase the area contaminated.

## VI. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Utilize protective clothing and equipment (see Section VII). Spills should be taken up mechanically and placed into labelled, closable containers. Avoid generation of dust. Spill area can be washed with water. Collect wash water for approved disposal.

## VII. HANDLING AND STORAGE

STORAGE TEMPERATURE: Less than 122 F (50 C), and above freezing.  
 SHELF LIFE: Five (5) years - Estimated.  
 SPECIAL SENSITIVITY: None known.  
 HANDLING/STORAGE PRECAUTIONS: Avoid getting in eyes or on skin. Wash thoroughly after handling. Store in a dry place away from excessive heat. Reseal containers immediately after use. Store away from food and beverages.

## VIII. EXPOSURE CONTROL/PERSONAL PROTECTION

EYE PROTECTION: Safety glasses or goggles are recommended.  
 SKIN PROTECTION: Rubber gloves and other protective clothing as appropriate to prevent skin contact.  
 RESPIRATOR: None.  
 ADDITIONAL PROTECTIVE MEASURES: Emergency showers and eye wash stations should be available. Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees on the safe use and handling of the product.

## IX. PHYSICAL DATA

SOLUBILITY IN WATER: Miscible  
 ODOR: Weak Aromatic  
 FORM: Liquid  
 COLOR: Light Tan  
 pH: 7.5-8.5

## X. STABILITY AND REACTIVITY

STABILITY: This is a stable material.  
 HAZARDOUS POLYMERIZATION: Will not occur.  
 INCOMPATIBILITIES: None known.  
 INSTABILITY CONDITIONS: Stable at normal temperatures and storage conditions.  
 DECOMPOSITION TEMPERATURE: Greater than 518 F (270 C).  
 DECOMPOSITION PRODUCTS: Thermal decomposition may product potentially toxic and/or hazardous gases.

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**XI. TOXICOLOGICAL INFORMATION**

**ANIMAL DATA** - Active Ingredient shows low toxicity by all routes of exposure.

**ACUTE TOXICITY**

ORAL:	Rat LD50 - >5,000 mg/kg; FIFRA Category IV
DERMAL:	Rat LD50 - >5,000 mg/kg; FIFRA Category IV
INHALATION:	Rat LC50 - >2.04mg/l; FIFRA Category IV
EYE IRRITATION:	Rabbit; mild irritation; all animals free of irritation in 72 hours; FIFRA Category III
SKIN IRRITATION:	Rabbit; slight irritation; all animals free of Irritation in 24 hours; FIFRA Category III

No skin allergy was observed in guinea pigs following repeated skin exposure.

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**XII. ECOLOGICAL INFORMATION**

**AQUATIC TOXICITY LC50:** 5,300 mg/l (pimephales promelae)

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**XIII. DISPOSAL CONSIDERATIONS**

Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial and Local Regulations.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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**XIV. TRANSPORTATION INFORMATION**

D.O.T. SHIPPING NAME:	None
D.O.T. HAZARD CLASS:	Non-regulated
PRODUCT RQ (lbs.)	None
D.O.T LABEL:	Non-regulated
D.O.T. PLACARD:	Non-regulated
PRODUCT LABEL:	Flight Control™

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**XV. REGULATORY INFORMATION**

**OSHA STATUS:** This product is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

**TSCA STATUS:** On TSCA Inventory

**CERCLA REPORTABLE QUANTITY:** None

**SARA TITLE III:**

**SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES:** None

**SECTION 311/312 HAZARDOUS CATEGORIES:** Non-hazardous under Section 311/312

**SECTION 313 TOXIC CHEMICALS:** None

**RCRA STATUS:** If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, 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. (40 CFR 261.20-24)

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**XVI. OTHER INFORMATION**

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on regulatory requirements you should contact the appropriate agency in your state.

NEW JERSEY: The active ingredient is contained on the New Jersey Hazardous Substance List, NJ1

PENNSYLVANIA: The active ingredient is considered Pennsylvania Non-hazardous, PA3

CALIFORNIA PROPOSITION 65: To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects or other reproductive effects.

MASSACHUSETTS SUBSTANCE LIST (MSL): Hazardous substances and extraordinary hazardous substances on the MSL must be identified when present in products. To the best of our knowledge, this product contains no substances at a level which could require reporting under the statute.

NFPA 704M RATINGS:      Health                      Flammability                      Reactivity  
    1    1    0  
    0 = Insignificant      1 = Slight      2 = Moderate      3 = High      4 = Extreme

HMS RATINGS:                      Health                      Flammability                      Reactivity                      Other  
    1    1    0    B  
    0 = Minimal      1 = Slight      2 = Moderate      3 = Serious      4 = Severe      B = Safety Glasses, gloves

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**XVII. APPROVALS**

PREPARED BY:                      K. E. Ballinger  
 APPROVAL DATE:                      06/18/99  
 SUPERSEDES DATE:                      12/16/98  
 MSDS NUMBER                      062488

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## 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.

## 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,

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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 <sup>3</sup>
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/m<sup>3</sup> total hydrocarbon vapor.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Amber colored liquid
<b>Odor:</b>	Mild amine odor
<b>Odor threshold:</b>	No data available
<b>pH:</b>	5.5 - 8
<b>Melting point/freezing point:</b>	25° F (-4° C)
<b>Initial boiling point and boiling range</b>	No data available
<b>Flash point:</b>	>230° F (>110° C) Setflash
<b>Evaporation rate:</b>	No data available
<b>Flammability (solid, gas):</b>	No data available
<b>Upper/lower flammability or explosive limits:</b>	No data available
<b>Vapor pressure:</b>	No data available
<b>Vapor density:</b>	No data available
<b>Relative density:</b>	1.169 @ 25° C
<b>Solubility(ies):</b>	Soluble
<b>Partition coefficient: n-octanol/water:</b>	No data available
<b>Autoignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity:</b>	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.

### 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 LD<sub>50</sub>: 1,750 mg/kg (female) (estimated based on mortalities for doses tested)

**Dermal:** Rat LD<sub>50</sub>: >2,000 mg/kg

**Inhalation:** Rat 4-hr LC<sub>50</sub>: >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 <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:**

Fluroxypyr 1-Methylheptyl Ester is highly toxic to aquatic invertebrates on an acute basis (LC<sub>50</sub> or EC<sub>50</sub> 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 (LD<sub>50</sub> >2,000 mg/kg and LC<sub>50</sub> >5,000 ppm).

**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.

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

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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

**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.

**Date of Issue:** June 11, 2015

**Supersedes:** February 6, 2015

Escalade 2 is a registered trademark of Nufarm Americas Inc.



# Fertilizer with 0.29% Barricade® Herbicide

Manufactured & Guaranteed by  
 Turf Care Supply Co  
 50 Pearl Road, Suite  
 Brunswick, OH 442

This is a granular fertilizer product containing 0.29% Proflamime by weight.

For selective preemergence control of grass and broadleaf weeds in:

- Established Turfgrasses (excluding golf course putting greens), lawns, athletic fields, parks and sod farms
- Field-grown and landscape ornamentals
- Established perennials and wildflower plantings
- Non-crop areas, including landscape beds, ornamentals, and established perennial wildflower plantings on or surrounding municipal grounds and government installations, managed rights-of-way for transportation systems and utilities (including, roadways, roadsides, railways, and equipment yards.)

Active Ingredient: Proflamime\* ..... 0.29%

Other Ingredients: ..... 99.71%

Total: ..... 100.00%

\* CAS No. 29091-21-2

## KEEP OUT OF REACH OF CHILDREN CAUTION

See additional precautionary statements and directions for use.

# 19-0-5

### GUARANTEED FERTILIZER ANALYSIS

TOTAL NITROGEN (N) ..... 19.0%

18.0% Urea Nitrogen\*

0.9% Water Insoluble Nitrogen

0.1% Water Soluble Nitrogen

SOLUBLE POTASH (K<sub>2</sub>O) ..... 5.0%

IRON (Fe) ..... 0.5%

DERIVED FROM: Polymer Sulfur Coated Urea, Urea, Biosolids, Muriate of Potash

CHLORINE (Cl) Max ..... 3.8%

\* 4.3 Slowly Available Nitrogen from Polymer Sulfur-Coated Urea

Typically, a lawn utilizes 1 to 4 lbs. of nitrogen per 1,000 sq. ft. per growing season. When applied as directed, this product provides 0.57 - 0.76 lb. of nitrogen per 1,000 sq. ft. Contact your local Extension Service for information specific to your geographic region.

If this product is being sold in a state requiring the publication of information regarding its metal content, information regarding the contents and levels of metals in this product is available at the following website: <http://www.apcoo.org/metals.htm>

### FIRST AID

<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-633-8253 for emergency medical treatment information.

### HOT LINE NUMBER

For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call **1-800-633-8253**

### PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

## CAUTION

Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wear protective eyewear. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or when using the toilet. Wear long-sleeved shirt and long pants, socks, shoes, and gloves. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

### Personal Protective Equipment (PPE)

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
  - Shoes plus socks
  - Chemical-resistant gloves made of any waterproof material
- Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

### Engr

When handlers use closed that meets the requirement for agricultural pesticides [ requirements may be reduced]

### Users should:

- Wash hands before using the toilet.
- Remove clothing/PP thoroughly and put o
- Remove PPE immec outside of gloves bei thoroughly and chan

This product has low solut is not toxic to fish. How

it may be toxic to fish. Dc treated areas may be he Do not contaminate wa **CONDITIONS OF SA**

**NOTICE:** Read the entire Director Liability before buying or using thi once, unopened, and the purchase

The Directions for Use of this prod. inherently associated with the use of result because of such factors as i influencing factors in the use of the pr To the extent permitted by applicabl harmless for any claims relating to su Turf Care Supply Corp. warrants that reasonably fit for the purposes stated when used in accordance with direct law: (1) this warranty does not exti conditions not reasonably foreseeabl Buyer and User assume the risk of a TURF CARE SUPPLY CORP. MAKE A PARTICULAR PURPOSE NOR. WARRANTED BY THIS LABEL.

To the extent permitted by applicat incidental, consequential or special c **EXTENT PERMITTED BY APPLICA AND THE EXCLUSIVE LIABILITY C CLAIMS, LOSSES, INJURIES OF WARRANTY, CONTRACT, NEGLIGENCE, NEGLIGENCE, NEGLIGENCE FROM THE USE OR HANDLING OF PRICE OF THE PRODUCT OR, AT REPLACEMENT OF THE PRODUCT Turf Care Supply Corp. and Seller of Conditions of Sale and Limitation of agreement signed by a duly authorize**  
**Net Weight 50.**

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirement specific to your State and Tribe, consult the State/Tribal agency responsible for pesticide regulation.

- For use on plants intended for aesthetic purposes or climatic modification
- Read entire label before using this product

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.** Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**Do not enter or allow others to enter until dusts have settled.**

TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide controls certain grass and broadleaf weeds before they emerge and provides residual control in established turfgrasses, and ornamentals and other non-crop area. TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide inhibits shoot and root growth in susceptible weeds. TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide will not control established weeds. Weed control is most effective when TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide is activated by at least 0.5 inch of rainfall or irrigation before weed seeds germinate and within 14 days following application.

**Weeds Controlled:**

Barnyardgrass	Crabgrass (Large, Smooth) <sup>2</sup>	Henbit
Bluegrass Annual (70a annual) <sup>3</sup>	Cirriodgrass	Johngrass
Carpetweed	Cudgrass, Woolly	Johnsongrass (from seed)
Chickweed, Common	Foxtails, Annual	Jungleweed
Chickweed, Mouseear (from seed)	Goosegrass <sup>3</sup>	Knockweed

Koohia

Purslane, Common

Speedwell, Persian

Lambquarter, Common

Pursley, Florida

Spangletop

Lovegrass

Rescuegrass<sup>4</sup>

Spurge, Prostrate

Panicum (Texas, Fall, Browntop)

Shepherd's Purse

Witchgrass

Pigweed

Signalgrass, Broadleaf

Woodsorrel, Yellow (from seed)

<sup>1</sup>In areas where *Poa annua* is a winter annual, apply TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide (see rate table) in August or September to established, non-overseeded turf before *Poa annua* seeds germinate. These findings are approximate. Consult State Extension Service for more specific timing for your area.

<sup>2</sup>Fall Applications for Spring Crabgrass Control in Cool-Season Grasses: In those areas where the ground freezes in the winter, TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide can be applied in the fall after the soil temperature falls below 50°F but before the ground freezes. This application will control crabgrass the following spring.

<sup>3</sup>In many areas, a single application will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, make a second application 60-90 days later to ornamentals and lawns (if recommended for your lawn grass species).

<sup>4</sup>Suppression only.

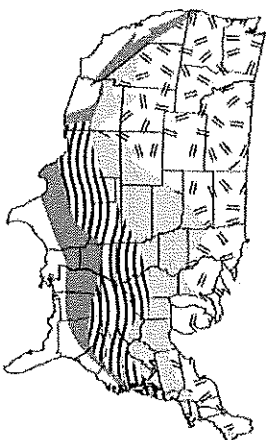
## ESTABLISHED TURF

Golf courses (except putting greens), lawns, parks, athletic fields, sod farms

### How to Apply

- Do not apply more than 12.0 lbs. product/1,000 sq. feet (1.5 lbs. ai/A) per calendar year.
- Do not make more than two applications per calendar year.
- Refer to Rates for Grass Species table and Granular Spreader Settings table for spreader settings to deliver the rate recommended for your lawn grass species. Uniform coverage is necessary to provide the most effective level of control.
- Apply TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide to the turf in the early spring prior to crabgrass emergence. See Crabgrass Germination Dates in the map below for the approximate timing in your area. Always apply before weeds emerge. TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide will not control emerged crabgrass.
- If you have a known serious weed problem or live in an area with an extended growing season, you may need to make a second application 60-90 days later.
- If you live in Zones D and E (see Crabgrass Germination Dates map), you may make two applications for more effective crabgrass control, if recommended for your turfgrass species.
- Do not make a second application to Fine Fescue, Creeping Bentgrass, and newly sprigged and plugged Bermudagrass.
- For best control - After application, water in with ½ inch of water within 14 days, either from watering or rain.

### Crabgrass Seed Germination Dates



Approximate Date

- Zone A After May 30 -
- Zone B After May 10 -
- Zone C After April 20 -
- Zone D After March 20 -
- Zone E January 1 to March 20 -

Rates

Bermudagrass (established)

Bahiagrass

Centipedegrass

Kirkyuagrass

Seashore Paspalum

St. Augustine grass

Tall Fescue (including turf-type)

Zoysiagrass

Buffalo grass

Kentucky Bluegrass

Perennial Ryegrass

Fine Fescue (including Red Fescue)

Creeping Bentgrass (0.5 inch and greater height)<sup>3</sup>

Bermudagrass (newly sprigged and plugged)<sup>4</sup>

<sup>1</sup>A second application may be growing season.

<sup>2</sup>See Granular Spreader Setting.

<sup>3</sup>To avoid grass injury, do not Herbicide to creeping bentgrass

<sup>4</sup>Newly sprigged or plugged Ber

### Granular Spreader Set

Make and Models

LESCO Rotary

Earthway Rotary

- 1 Assume 3 mph walking speed
- 2 It is recommended that manufacturer's settings can be used
- 3 Do not apply more than 1.5 lb

### Use Precautions

- Do not apply to putting greens annual bluegrass (*Poa annua*)
- Do not cut (harvest) treated so newly-set sod until the sod has fertility, or pest damage may result
- Application of TCS GrowStar® Fertilizer, or pest damage may result
- Disturbing the herbicide barrier
- Seeding: Do not apply to open which ever is larger. Do not over

**LANDSCAPE FIELD GROWN ORNAMENTALS AND NON-CROP AREAS**

**How to Apply**

- Apply TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide as a broadcast, over-the-top application at 5.2-11.9 lb product/1,000 sq. ft. Use higher rates when weed pressure was a severe problem in the past.
- Make a single application in fall and/or spring prior to weed emergence. Another application may be made 60-90 days later, if necessary. Do not exceed a total of 11.9 lb product/1,000 sq. ft. per year.
- After application, water in with ½ inch of water within 14 days, either from watering or rain or, incorporate into the top 1-2 inches of soil within 14 days after application.
- On established ornamentals, watering or rainfall soon after application will wash residues off plant foliage and activate TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide in the soil.

Tolerant Ornamentals  
TCS GrowStar® Fertilizer with 0.29% Barricade® Herbicide will not harm most trees, shrubs, vines and flowers. See the two tables: Table 1. Tolerant Ornamentals – All States and Table 2. Tolerant Ornamentals – All States

Table 1. Tolerant Ornamentals – All States								
Scientific Name	Common Name	Scientific Name	Common Name	Scientific Name	Scientific Name	Common Name	Common Name	SI
<i>Abies</i> spp.	Fir species (Balsam, Fraser, Noble, etc.)	<i>Elaeagnus pungens</i>	Silverberry	<i>Malus</i> spp.		Crabapple*	<i>Pyracai</i>	
<i>Acer palmatum</i>	Japanese Maple	<i>Euonymus fortunei</i>	Wintercreeper	<i>Nandina domestica</i>		Heavenly Bamboo	<i>Pyrus s</i>	
<i>Acer platanoides</i>	Norway Maple	<i>Euonymus japonica</i>	Japanese Spindle Tree (Evergreen Euonymus)	<i>Narcissus</i> spp.		Narcissus species	<i>Quercu</i>	
<i>Actinidia chinensis</i>	Kiwi*	<i>Euonymus katuschovicks</i>	Spreading Euonymus	<i>Nerium</i> spp.		Oleander	<i>Rhaphi</i>	
<i>Agapanthus africanus</i>	Lily-of-the-Nile (African Lily)	<i>Fatsia japonica</i>	Japanese Aralia	<i>Olea europaea</i>		Olive*	<i>Rhodoc Azalea)</i>	
<i>Arctostaphylos densiflora</i>	Vine Hill Manzanita	<i>Forsythia intermedia</i>	Border Forsythia	<i>Ophiopogon japonicus</i>		Mondo Grass	<i>Rosa b.</i>	
<i>Arctotheca calendula</i>	Cape Weed	<i>Forsythia viridissima</i>	Greenstem Forsythia	<i>Osteospermum fruticosum</i>		Trailing African Daisy	<i>Rosma</i>	
<i>Aucuba japonica</i>	Japanese Aucuba	<i>Gardenia jasminoides</i>	Gardenia, Cape-Jasmine	<i>Oxydendrum arboreum</i>		Sourwood	<i>Rumoh.</i>	
<i>Berberis gladywomensis</i>	Barberry	<i>Gladiolus</i> spp.	Gladiolus species	<i>Persia americana</i>		Avocado*	<i>Santoli</i>	
<i>Berberis julianae</i>	Wintergreen Barberry	<i>Hedera helix</i>	English Ivy	<i>Phorinia fraseri</i>		Fraser's Phortinia (Redtip)	<i>Sedum</i>	
<i>Berberis mentorensis</i>	Mentor Barberry	<i>Hibiscus</i>	Rose of Sharon	<i>Picea</i> spp.		Spruce species (Colorado Blue, Norway, etc.)	<i>Syzygil</i>	
<i>Berberis thunbergii</i>	Japanese Barberry	<i>Hibiscus Rosa-sinensis</i>	Chinese Hibiscus	<i>Pieris japonica</i>		Lily-of-the-Valley Shrub	<i>Taxus c</i>	
<i>Berberis verruculosa</i>	Warty Barberry	<i>Ilex cornuta</i>	Chinese Holly	<i>Pinus brutia</i>		Calabrian Pine	<i>Taxus o</i>	
<i>Buxus microphylla</i>	Japanese Boxwood	<i>Ilex crenata</i>	Japanese Holly	<i>Pinus canariensis</i>		Canary Island Pine	<i>Thuja 1</i>	
<i>Callistemon viminalis</i>	Weeping Bottlebrush	<i>Ilex opaca</i>	American Holly	<i>Pinus elliotii</i>		Slash Pine	<i>Trachel asiaticu</i>	
<i>Calluna vulgaris</i>	Scotch Heather	<i>Ilex pernyi</i>	Holly	<i>Pinus halepensis</i>		Aleppo Pine	<i>Tsuga c</i>	
<i>Carpobrotus edulis</i>	Hottentot Fig (Ice Plant)	<i>Ilex vomitoria</i>	Yaupon Holly	<i>Pinus nigra</i>		Austrian Black Pine	<i>Tulipa s</i>	
<i>Cassia artemisioides</i>	Feathery Cassia	<i>Iris</i> spp.	Iris species	<i>Pinus palustris</i>		Longleaf Pine	<i>Viburnu</i>	
<i>Ceanothus rigidus</i>	Wild Lilac	<i>Jasminum nudiflorum</i>	Winter Jasmine	<i>Pinus radiata</i>		Monterey Pine	<i>Viburnu</i>	
<i>Chamaecyparis pisifera</i>	False Cypress	<i>Juniperus chinensis</i>	Chinese Juniper	<i>Pinus strobus</i>		Eastern White Pine	<i>Viburnu</i>	
<i>Cleyera japonica</i>	Cleyera	<i>Juniperus conferta</i>	Shore Juniper	<i>Pinus sylvestris</i>		Scotch Pine	<i>Viburnu</i>	
<i>Citrus</i> spp.	Citrus species*	<i>Juniperus horizontalis</i>	Creeping Juniper	<i>Pinus taeda</i>		Loblolly Pine	<i>Viburnu</i>	
<i>Cornus florida</i>	Flowering Dogwood	<i>Juglans</i> spp.	Walnut*	<i>Pinus thunbergiana</i>		Japanese Black Pine	<i>Viburnu</i>	
<i>Cornus stolonifera</i>	American Dogwood	<i>Justicia brandegeana</i>	Shrimp Plant	<i>Pinus virginiana</i>		Virginia Pine	<i>Viburnu</i>	
<i>Cortaderia selloana</i>	Pampas Grass	<i>Lagerstromia indica</i>	Crape Myrtle	<i>Pistacia</i> spp.		Pistachio*	<i>Vinca n</i>	
<i>Cotoneaster apiculatus</i>	Cranberry Cotoneaster	<i>Ligustrum amurense</i>	Amur Privet	<i>Pittosporum rhombifolium</i>		Queensland Pittosporum	<i>Vinca n</i>	
<i>Cotoneaster buxifolius</i>	Cotoneaster	<i>Ligustrum japonicum</i>	Japanese Privet	<i>Pittosporum tobira</i>		Japanese Pittosporum	<i>Vitis sp</i>	
<i>Cotoneaster dammeri</i>	Bearberry Cotoneaster	<i>Ligustrum lucidum</i>	Glossy Privet (Max-Leaf)	<i>Podocarpus macrophyllus</i>		Japanese Yew	<i>Weigeli</i>	
<i>Cotoneaster microphyllus</i>	Rockspray Cotoneaster	<i>Liripe muscarif</i>	Big Blue Lillyturf	<i>Prunus laurocerasus</i>		English Laurel	<i>Yucca f</i>	
<i>Crataegus</i> spp.	Hawthorne	<i>Lonicera japonica</i>	Japanese Honeysuckle	<i>Prunus</i> spp.		Almond, Apricot, Nectarine, Peach, Plum and Prune*	<i>Yucca f</i>	
<i>Cupressus sempervirens</i>	Italian Cypress	<i>Lonicera tatarica</i>	Tatarian Honeysuckle	<i>Pseudotsuga menziesii</i>		Douglas Fir	<b>*Do not</b>	
<i>Delosperma alba</i>	White Trailing Ice Plant	<i>Magnolia</i> spp.	Magnolia species	<i>Pyracantha coccinea</i>		Firethorn Scarlet		
<i>Dodonaea viscosa</i>	Hop Bush	<i>Malephora luteola</i>	Ice Plant	<i>Pyracantha fortuneana</i>		Firehorn		

**Table 2. Tolerant Ornamental Species/Varieties – All States Except California**

Scientific Name	Common Name	Scientific Name	Common Name	Scientific Name	Common Name	Scientific Name	Common Name	S
<i>Abelia grandiflora</i>	Abelia: Sherwood	<i>Chrysanthemum nipponicum</i>				<i>Hydrangea macrophylla</i>	Bigleaf Hydrangea	Perovskia
<i>Achillea</i> spp.	Yarrow: King Edward	<i>Coreopsis</i> spp.	Coreopsis (Callopsis): Early Sunrise, Moonbeam			<i>Inula ensifolia</i>		Physost
<i>Agapanthus orientalis</i>		<i>Crocus</i> spp.	Lucifer			<i>Iris ensata</i>		Quercus
<i>Akebia quinata</i>	Five-Leaf or Chocolate Vine	<i>Delosperma</i> spp.	Cooper Pink			<i>Iris siberica</i>	Siberian Iris; Cabernet	Rhapitic
<i>Allium cernuum</i>	Lady's Leek, Nodding Onion	<i>Delphinium</i> spp.	Larkspur, Blue Elf			<i>Juniperus davurica</i>	Parsoni	Rhodod (azalea)
<i>Anemone hybrida</i>	Japanese Anemone	<i>Dianthus deltoides</i>	Dianthus, Maiden Pinks			<i>Lagerstromia indica x fauriei</i>	Crape Myrtle; Tuscarora	Rudbec
<i>Aquilegia</i> spp.	Aquilegia: Red and Gold	<i>Dianthus gratianopolitanus</i>	Cheddar Pink			<i>Lantana montevidensis</i>	Weeping Lantana	Saxifrag
<i>Artemisia</i> spp.	Wormwood; Silver Mound, Castle	<i>Echinacea purpurea</i>	Coneflower, Purple, Magnus			<i>Lavender</i> spp.	Lavender; Munstead	Scabios
<i>Aster</i> spp.	Aster: Bonny Blue, Purple Dome	<i>Forsythia suspensa</i>	Weeping Forsythia			<i>Leontopodium alpinum</i>	Edelweiss	Sedum
<i>Aster X trikartii</i>		<i>Gaillardia</i> spp.	Gaillardia, Blanket Flower: 'Goblin'			<i>Ligustrum sinense</i>	Chinese Privet; Variegata	Sedum
<i>Athyrium filix-femina</i>	Lady Fern; Fern Lady	<i>Gaura</i> spp.	Gentian			<i>Lilium</i> spp.	Lily: Jazz	Sedum
<i>Begonia</i> spp.	Fibrous Begonia: Hardy Grandis	<i>Gentiana dahurica</i>				<i>Liriope muscari</i> var. <i>variegata</i>	Liriope, Variegated	Spiraea
<i>Bergenia cordifolia</i>		<i>Geranium cinereum</i>	Cranesbill			<i>Liriope spicata</i>	Liriope, Creeping	Syrizglu
<i>Boltonia asteroides</i>	Snowbank	<i>Gypsophila repens</i>	Baby's Breath			<i>lobelia cardinalis</i>	Cardinal Flower, Indian Pink	Teucliu
<i>Bougainvillea</i> spp.	Bougainvillea	<i>Helianthemum</i> spp.	Sunrose			<i>Loropetalum chinense</i>	Burgundy	Thalictr
<i>Buddleia davidii</i>	Butterfly-Bush (Dwarf Blue); Royal Red	<i>Hemerocallis</i> spp.	Daylily: Aztec Gold, Stella De Oro, Tender Love			<i>Lythrum</i> spp.	Loosestrife; Modern Pink	Veronic
<i>Callistemon citrinus</i>	Crimson Bottlebrush	<i>Heuchera</i> spp.	Coral Bell; Bridget Bloom			<i>Miscanthus sinensis</i>	Yaku Jima, Silberfeder	Viburnu
<i>Campanula carpatica</i>	Tussock Bellflower; (White Clips)	<i>Hibiscus</i> spp.	Mallow; Disco Belle White			<i>Oenothera missouriensis</i>	Evening Primrose	*Do not
<i>Campis X tagliabuana</i>	Trumpet Creeper, Trumpet Flower, Madame Galen	<i>Hosta plantaginea</i>	Hosta, Plantain Lily (Fragrant)			<i>Osmanthus heterophyllus</i>	Osmanthus (False Holly); Gulf Tide	
<i>Ceratostigma plumbeginoides</i>		<i>Hosta sieboldiana</i>	Hosta, 'Seasucker'			<i>Paeonia suffruticosa</i>	Tree Peony	
		<i>Houttuynia cordata</i> var. <i>variegata</i>				<i>Pennisetum setaceum</i>	Fountain Grass (Dwarf)	

**STORAGE AND DISPOSAL**

**Pesticide Disposal and Container Handl**

Do not contaminate water, food, or feed by storage and disposal. Store in a cool, dry place. Keep container closed and away from food, feedstuffs, and domestic water supplies.

**Pesticide Storage:** Store in a cool, dry place. Keep container closed and away from food, feedstuffs, and domestic water supplies.

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

**Container Handling:** Non-refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Pesticide Disposal and Container Handl** Non-refillable Container. Do not reuse o

If empty: Place in trash or offer for recycling if available.

If partly filled: Call your local solid waste agency for disposal instructions.

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