



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Triamine® Jet-Spray Spot Weed Killer Ready-To-Use

EPA Reg. No.: 228-190

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 Certain sections of this SDS are superseded by federal law governed by EPA for a registered pesticide.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.

PHYSICAL HAZARDS:

Hazard Not Otherwise Classified: Contents under pressure. Exposure to temperatures above 130° F may cause bursting.

HEALTH HAZARDS:

Acute toxicity, oral	Category 4
Acute toxicity, inhalation	Category 3
Specific target organ toxicity – Repeated exposure	Category 2

ENVIRONMENTAL HAZARDS:

Hazardous to aquatic environment, acute	Category 3
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SIGNAL WORD:

DANGER

HAZARD STATEMENTS:

Harmful if swallowed. Toxic if inhaled. May cause damage to organs (liver, kidney) through prolonged or repeated exposure. Harmful to aquatic life.



PRECAUTIONARY STATEMENTS

Harmful if swallowed. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. 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. Rinse mouth.

Avoid breathing mists, vapors, or spray. Use only outdoors or in a well-ventilated area. 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.

Do not breathe mist, vapors, or spray. Respiratory protection not normally required. If mists or vapors exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides. Get medical advice/attention if you feel unwell.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	2008-39-1	0.3 – 0.35
Dimethylamine Salt of (+)-R-2-(2-Methyl-4-Chlorophenoxy) propionic Acid	66423-09-4	0.15 – 0.18
Dimethylamine Salt of (+)-R-2-(2,4-Dichlorophenoxy) propionic Acid	104786-87-0	0.15 – 0.18
Propane/butane propellant mixture (liquefied petroleum gas)	74-98-6 / 106-97-8	4.75 – 5.25
Other Ingredients:	Trade Secret	Trade Secret

Synonyms: Mixture of DMA salts of 2,4-D, Mecoprop-p (MCP-p) and Dichlorprop-p (2,4-DP-p)
 Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

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.

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.

Most important symptoms/effects: skin irritation, eye irritation, respiratory 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: Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.

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: Contents under pressure. Exposure to temperatures above 130°F may cause bursting.

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:

Avoid contact with eyes, skin, or clothing. Avoid breathing spray mist or vapor. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. After using this product, wash non-disposable gloves thoroughly with soap and water before removing, remove clothing and launder separately before reuse, and promptly and thoroughly wash hands and exposed skin with soap and water. Remove saturated clothing as soon as possible and shower. Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

STORAGE:

Keep from freezing. To be stored in original container and placed in an area inaccessible to children. Do not use or store near heat or open flame. Do not puncture, incinerate or store above 130° F (54° C).

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 chemical goggles glasses. An emergency eyewash or water supply should be readily accessible to the work area.

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

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

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

Exposure Guidelines:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
DMA Salt of 2,4-D	10*	NE	10*	NE	mg/m ³
DMA Salt of Mecoprop-p	NE	NE	NE	NE	
DMA Salt of Dichlorprop-p	NE	NE	NE	NE	
Propane	1,000	NE	1,000	NE	ppm
Butane	1,000	NE	1,000	NE	ppm
Other Ingredients	N/A	N/A	N/A	N/A	

*Based on adopted limit for 2,4-D

NE = Not Established

N/A= Not Applicable

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dispensed as a foam
Odor:	No data available
Odor threshold:	No data available
pH:	9-10
Melting point/freezing point:	No data available
Initial boiling point and boiling range	No data available
Flash point:	No flame extension with method ASTM D3065-72.
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper/lower flammability or explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Percent VOC:	50 g/L @ 20°C (5% by wt)

SAFETY DATA SHEET

Triamine® Jet-Spray Spot Weed Killer Ready-To-Use

Relative density:	1.008 g/cc (8.4 lb/gal) @ 25° C
Solubility(ies):	Dispersible in water
Partition coefficient: n-octanol/water:	No data available
Autoignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available

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, flame or expose to prolonged sunlight. Contents under pressure. Exposure to temperatures above 130° F may cause bursting.

Incompatible Materials: None known.

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: Inhalation, eye and skin contact.

Symptoms of Exposure: Skin irritation, eye irritation, respiratory irritation

Delayed, immediate and chronic effects of exposure: Skin irritation, eye irritation, respiratory system effects.

Toxicological Data:

Except as noted, data from laboratory studies conducted on a similar, but not identical, formulation:

Oral: Rat LD₅₀: >500 thru 5,000 mg/kg

Dermal: Rat LD₅₀: >2,000 mg/kg

Inhalation: Rat 4-hr LC₅₀: >0.5 thru 2 mg/l

Eye Irritation: Rabbit: Minimally irritating (data on this product)

Skin Irritation: Rabbit: Slightly 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: 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, newer rat and mouse lifetime feeding studies as well as an MCPP lifetime feeding study in rats, did not show carcinogenic potential for 2,4-D, MCPP or dichlorprop/dichlorprop-p. The U.S. EPA has given 2,4-D and chlorophenoxy herbicides a Class D classification (not classifiable as to human carcinogenicity).

Reproductive Toxicity: No impairment of reproductive function attributable to 2,4-D have been noted in laboratory animal studies. No impairment of reproductive function attributable to dichlorprop has been noted in laboratory animal studies.

Developmental Toxicity: Studies in laboratory animals with 2,4-D and MCPP have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. Rat and rabbit studies on dichlorprop-p resulted in fetal mortality, decreased fetal body weight, decreased body weight gain and developmental delays at doses that were also toxic to mother animals. There was no evidence of birth defects in either species.

Genotoxicity: There have been some positive and some negative studies, but the weight of evidence is that neither 2,4-D nor MCPP is mutagenic. Genotoxicity studies on dichlorprop-p have been inconclusive with some positive and some negative results, but the weight of evidence suggests it is not mutagenic.

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
Propane/butane propellant mixture (liquefied petroleum gas)	No	No	No	No
Other Ingredients	No	No	No	No

12. ECOLOGICAL INFORMATION

Environmental Hazards:

This pesticide is toxic to fish and aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants.

Ecotoxicity:

Data on 2,4-D Dimethylamine Salt:

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

Data on Mecoprop-p Dimethylamine Salt:

96-hour LC ₅₀ Bluegill:	>93 mg/l	Bobwhite Quail Oral LD ₅₀ :	>498 mg/kg
96-hour LC ₅₀ Rainbow Trout:	>150 mg/l	Bobwhite Quail 8-day Dietary LC ₅₀ :	>4,633 mg/kg
48-hour LC ₅₀ Daphnia:	>91 mg/l	Mallard Duck 8-day Dietary LC ₅₀ :	>4,137 mg/kg

Data on Dichlorprop-p Dimethylamine Salt:

96-hour LC ₅₀ Bluegill:	>151 mg/l	Bobwhite Quail Oral LD ₅₀ :	>225 and < 560 mg/kg
96-hour LC ₅₀ Rainbow Trout:	>109 mg/l	Bobwhite Quail 8-day Dietary LC ₅₀ :	>5,600 ppm
		Mallard Duck 8-day Dietary LC ₅₀ :	>700 ppm

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. Mecoprop-p DMA rapidly dissociates to parent mecoprop-p in the environment. In soil, mecoprop-p is microbially degraded with a typical half-life of approximately 11 to 15 days. Dichlorprop-p DMA salt rapidly dissociates to parent dichlorprop-p in the environment. In soil, dichlorprop-p has a typical half-life of approximately 7 days.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Do not puncture or incinerate. Nonrefillable container. Do not reuse or refill this container. **If empty** – Place in trash or offer for recycling if available. **If partly filled** – Call your local solid waste agency for disposal instructions.

14. TRANSPORTATION INFORMATION

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

DOT:

UN1950, Aerosols, non-flammable, (each not exceeding 1 L capacity) Ltd Qty

IMDG

UN1950, Aerosols, non-flammable, (each not exceeding 1 L capacity) Ltd Qty

IATA

UN1950, Aerosols, non-flammable, (each not exceeding 1 L capacity) Ltd Qty

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.

SAFETY DATA SHEET

Triamine® Jet-Spray Spot Weed Killer Ready-To-Use

CAUTION. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist or vapor. Wear long-sleeved shirt, long pants, shoes, socks and chemical-resistant gloves made of any waterproof material.

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 and Delayed

Section 313 Toxic Chemical(s):

Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7), 0.270% equivalent by weight in product
MCPP-p DMA expressed as MCPP (CAS No. 93-65-2), 0.135% equivalent by weight in product
DCPP- p DMA expressed as 2,4-DP (CAS No. 120-36-5), 0.135% equivalent by weight in product

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

Acetic Acid, (2,4-Dichlorophenoxy)- (CAS No. 94-75-7) 100 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: 1 Flammability: 2 (Level 1 Aerosol) 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: February 6, 2015

Supersedes: November 18, 2014

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