



MATERIAL SAFETY DATA SHEET

Syngenta Crop Protection, Inc.
Post Office Box 18300
Greensboro, NC 27419

Emergencies Call:
1-800-888-8372
Non-Emergencies Call: 1-
800-334-9481

Cyclone Star Herbicide

EPA Reg # 100-1316

See Attached MSDS's for:

(Component A) Gramoxone Inteon
(Component B) Aim EC Herbicide

Questions concerning the safe handling of these products should be referred to:

Syngenta Crop Protection
Health, Safety and Environmental Department
1-800-334-9481

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.



Syngenta Crop Protection, Inc.
Post Office Box 18300
Greensboro, NC 27419

In Case of Emergency, Call
1-800-888-8372

1. PRODUCT IDENTIFICATION

Product Name: **GRAMOXONE INTEON** Product No.: A7813K
EPA Signal Word: Danger-Poison
Active Ingredient(%): Paraquat Dichloride (30.1%) CAS No.: 1910-42-5
Chemical Name: (1,1'-dimethyl-4,4'-bipyridinium dichloride)
Chemical Class: Herbicide
EPA Registration Number(s): 100-1217 Section(s) Revised: 14

2. HAZARDS IDENTIFICATION

Health and Environmental
Fatal if inhaled. May be fatal if swallowed. Harmful in contact with skin. Causes eye and skin irritation.

Hazardous Decomposition Products
Combustion products of dry material: Carbon dioxide, carbon monoxide, chlorine, hydrogen chloride, possible trace amounts of phosgene, nitrogen oxides, ammonia, and other toxic and noxious fumes.

Physical Properties
Appearance: Bluish green to dark green liquid
Odor: Characteristic; strong

Unusual Fire, Explosion and Reactivity Hazards
Hydrolyzes in alkaline media. This product reacts with aluminum to produce hydrogen gas. Do not mix or store in containers or systems made of aluminum or having aluminum fittings.

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Paraquat Emetic (0.13%)	Not Established	Not Established	0.02 mg/m ³ TWA ***	No
Paraquat Dichloride (30.1%)	0.5 mg/m ³ TWA (respirable; skin; as paraquat)	0.1 mg/m ³ TWA (respirable); 0.5 mg/m ³ TWA (total)	0.08 mg/m ³ TWA (respirable); 0.5 mg/m ³ TWA (total) ***	No

*** Syngenta Occupational Exposure Limit (OEL)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
Syngenta Hazard Category: E, S

4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

- Ingestion:** SPEED IS ESSENTIAL. Immediate medical attention is required. If available, give an adsorbent such as activated charcoal, bentonite or Fuller's Earth.
Call a poison control center or doctor immediately for treatment advice.
Do not give anything by mouth to an unconscious person.
- Eye Contact:** If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact:** If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation:** Move person to fresh air.
The odor of this product is from the stenching agent, which has been added, not from the paraquat.
If person is not breathing, call 911 or an ambulance.
Call a poison control center or doctor for further treatment advice.

Notes to Physician

Refer to the booklet 'Paraquat Poisoning. A Practical Guide to Diagnosis, First Aid and Hospital Treatment' (<http://www.syngenta.com/pqmedguide/>). Administer either activated charcoal (100 g for adults or 2 g/kg body weight in children) or Fuller's Earth (15% solution; 1 liter for adults or 15 ml/kg body weight in children). NOTE: The use of gastric lavage without administration of an adsorbent has not shown any clinical benefit. Do not use supplemental oxygen. Eye splashes from concentrated material should be treated by an eye specialist after initial treatment. With the possibility of late onset corneal ulceration, it is advised that patients with paraquat eye injuries are reviewed by an eye specialist the day after first presentation. Use treatment that is appropriate for chemical burns. Intact skin is an effective barrier to paraquat, however, contact with irritated or cut skin or repeated contact with intact skin may result in poisoning.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

Flash Point (Test Method):	Not Available	
Flammable Limits (% in Air):	Lower: Not Applicable	Upper: Not Applicable
Autoignition Temperature:	Not Available	
Flammability:	Does not flash	

Unusual Fire, Explosion and Reactivity Hazards

Hydrolyzes in alkaline media. This product reacts with aluminum to produce hydrogen gas. Do not mix or store in containers or systems made of aluminum or having aluminum fittings.

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Untreated spilled material can dry to a highly irritating dust.

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Store above 32°F (0°C).

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

- Ingestion:** Store the material in a well-ventilated area out of the reach of children and domestic animals. Do not store food, beverages, or tobacco products in the storage area. Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.
- Eye Contact:** Where eye contact is likely, use chemical splash goggles.
- Skin Contact:** This product is FIFRA regulated. Refer to product labeling for end-user personal protection requirements. When handling or when exposure to concentrate is possible, wear: long-sleeved shirt and long pants, waterproof gloves, shoes and socks, face shield and chemical-resistant apron. Remove any contaminated clothing promptly. Syngenta conducted ASTM permeation tests using PVC gloves (0.2mm thickness) which showed no breakthrough of the product after eight hours of testing.
- Inhalation:** A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Bluish green to dark green liquid
Odor:	Characteristic; strong
Melting Point:	Not Applicable
Boiling Point:	Not Available
Specific Gravity/Density:	1.12 g/cm ³ @ 68°F (20°C)
pH:	4 - 8 (10 g/l in deionized water)
Solubility in H ₂ O	
Paraquat Dichloride:	620g/l @ 68°F (20°C)
Vapor Pressure	
Paraquat Dichloride:	7.5 x 10 ⁽⁻⁸⁾ mmHg @ 77°F (25°C)

10. STABILITY AND REACTIVITY

- Stability:** Stable under normal use and storage conditions.
- Hazardous Polymerization:** Will not occur.
- Conditions to Avoid:** Store above 32°F (0°C).
Stable in acidic and neutral solution. Decomposed by alkali and in the presence of U.V. light. Compound inactivated by adsorption onto inert clay.
- Materials to Avoid:** Hydrolyzes in alkaline media. This product reacts with aluminum to produce hydrogen gas. Do not mix or store in containers or systems made of aluminum or having aluminum fittings.
- Hazardous Decomposition Products:** Combustion products of dry material: Carbon dioxide, carbon monoxide, chlorine, hydrogen chloride, possible trace amounts of phosgene, nitrogen oxides, ammonia, and other toxic and noxious fumes.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral (LD50 Rabbit) :	310 mg/kg body weight
Dermal:	Dermal (LD50 Rabbit) :	> 2000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	0.0006 mg/l air - 4 hours (data based on a similar formulation)
Eye Contact:	Mildly Irritating (Rabbit)	
Skin Contact:	Moderately Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

Reproductive/Developmental Effects

Paraquat Dichloride: A 3-generation reproduction study showed no evidence of fertility or reproductive effects at doses below that causing maternal toxicity. Reproductive NOEL was above 7.5 mg/kg/day, the highest dose level.

Chronic/Subchronic Toxicity Studies

Paraquat Dichloride: Rodent studies showed signs of irritation in 21-day dermal studies. In a 2.5 year chronic study, rats showed evidence of cataracts, body weight reduction and lung effects (alveolar macrophage infiltration) at 75 ppm and above. A 90-day dog diet study showed evidence of lung effects leading to alveolar collapse and death at 3 mg/kg/day. Chronic pneumonitis was seen in a 1-year dog study at 0.93 mg/kg/day and above.

Carcinogenicity

Paraquat Dichloride: No evidence in the rat or mouse.

Other Toxicity Information

None

Toxicity of Other Components

Paraquat Emetic (0.13%)

Toxic if swallowed. Slightly irritating to skin and eyes. Inhalation of dust may cause nausea and vomiting.

Target Organs

Active Ingredients

Paraquat Dichloride: Lung, kidney

Inert Ingredients

Paraquat Emetic: Skin, eye, respiratory system

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Paraquat Dichloride:

Fish (Bluegill Sunfish) 96-hour LC50 13 ppm

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 1.2 ppm

Bird (Bobwhite Quail) 8-day LD50 176 mg/kg

Green Algae 4-day EC50 0.32 ppm

Environmental Fate

Paraquat Dichloride:

The information presented here is for the active ingredient, paraquat dichloride.

Low bioaccumulation potential. Persistent in soil. Not persistent in water. Immobile in soil. Sinks in water (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Corrosive D002

Listed Waste: Not listed

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

Proper Shipping Name: Corrosive Liquid, N.O.S. (Paraquat)

Hazard Class or Division: Class 8

Identification Number: UN 1760

Packing Group: PG III

Air Transport - NAFTA

Proper Shipping Name: Corrosive Liquid, N.O.S. (Paraquat)

Hazard Class or Division: Class 8

Identification Number: UN 1760

Packing Group: PG III

Packing Instructions: Passenger: PI 818 - Max. inner package 2.5 liter; Single packages, 5 liter Max.

Cargo: PI 820 - 5 liter. Inner packages, 60 liter single packages

B/L Freight Classification

Herbicides, NOI

Comments

Water Transport - International

Proper Shipping Name: Corrosive Liquid, N.O.S. (Paraquat), Marine Pollutant

Hazard Class or Division: Class 8

Identification Number: UN 1760

Packing Group: PG III

IMDG EMS #: F-A, S-B

Air Transport - International

Proper Shipping Name: Corrosive Liquid, N.O.S. (Paraquat)

Hazard Class or Division: Class 8

Identification Number: UN 1760

Packing Group: PG III

Packing Instructions: Passenger: PI 818 - Max. inner package 2.5 liter; Single packages, 5 liter Max.

Cargo: PI 820 - 5 liter. Inner packages, 60 liter single packages

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard
Chronic Health Hazard

Section 313 Toxic Chemicals: Paraquat Dichloride (30.1%) (CAS No. 1910-42-5)

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills > 5 gal. (based on paraquat dichloride [RQ = 10 lbs.] content in the formulation)

RCRA Hazardous Waste Classification (40 CFR 261)

Corrosive D002

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 4
Flammability: 0
Instability: 0

HMIS Hazard Ratings

Health: 3
Flammability: 0
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 2/18/2005

Revision Date: 6/30/2009

Replaces: 4/28/2009

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End of MSDS



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In Case of Emergency, Call
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1. PRODUCT IDENTIFICATION

Product Name: **AIM EC HERBICIDE** Product No.: A16836A
EPA Signal Word: Caution
Active Ingredient(%): Carfentrazone-ethyl (22.3%) CAS No.: 128639-02-1
Chemical Name: 2-Chloro-3-[2-chloro-5-(4-difluoromethyl-3-methyl-5-oxo-4,5-dihydro-[1,2,4] triazol-1-yl)-4-fluoro-phenyl] propionic acid ethyl ester
Chemical Class: Triazolinone Herbicide
EPA Registration Number(s): Not Applicable Section(s) Revised: 2, 3

2. HAZARDS IDENTIFICATION

Health and Environmental

May be harmful if swallowed or in contact with skin. Causes mild eye and skin irritation. Vapors may cause drowsiness and dizziness. May be harmful if swallowed and enters airway.

Hazardous Decomposition Products

None known.

Physical Properties

Appearance: Brown-orange liquid
Odor: Aromatic solvent

Unusual Fire, Explosion and Reactivity Hazards

Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back.

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Petroleum Solvent	Not Established	Not Established	100 mg/m ³ (19 ppm) TWA *	No
Naphthalene (< 10%)	10 ppm TWA	10 ppm TWA (skin)	10 ppm TWA **	See "Toxicity", Sec. 11
Calcium dodecylbenzene sulfonate (1 - 5%)	Not Established	Not Established	Not Established	No
Carfentrazone-ethyl (22.3%)	Not Established	Not Established	Not Established	No

* recommended by manufacturer
** recommended by NIOSH

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

- Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Contains petroleum distillate - vomiting may cause aspiration pneumonia.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

- Flash Point (Test Method): 176°F
- Flammable Limits (% in Air): Lower: Not Applicable Upper: Not Applicable
- Autoignition Temperature: Not Available
- Flammability: Combustible liquid

Unusual Fire, Explosion and Reactivity Hazards

Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back.

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use appropriate extinguishing media for combustibles in the area. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

- Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
- Eye Contact: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- Skin Contact: Where contact is likely, wear chemical-resistant gloves (such as barrier laminate or Viton), coveralls, socks and chemical-resistant footwear.
- Inhalation: A combination particulate/ organic vapor respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with an HE prefilter.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown-orange liquid
Odor:	Aromatic solvent
Melting Point:	Not Applicable
Boiling Point:	Not Available
Specific Gravity/Density:	9.00 lbs/gallon
pH:	5.3 (1% Aqueous Solution)
Solubility in H ₂ O	
Carfentrazone-ethyl:	12 ug/ml (68°F)
Vapor Pressure	
Carfentrazone-ethyl:	1.19 x 10 ⁻⁷ torr

10. STABILITY AND REACTIVITY

Stability:	Stable under normal use and storage conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Excessive heat and fire.
Materials to Avoid:	None known.
Hazardous Decomposition Products:	None known.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral (LD50 Rabbit) :	4077 mg/kg body weight
Dermal:	Dermal (LD50 Rabbit) :	> 4000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 6.31 mg/l air - 4 hours
Eye Contact:	Mildly Irritating (Rabbit)	

Skin Contact: Mildly Irritating (Rabbit)
Skin Sensitization: Not Available

Reproductive/Developmental Effects

Carfentrazone-ethyl: In studies with laboratory animals, carfentrazone-ethyl did not cause reproductive toxicity, teratogenicity or carcinogenicity. An overall absence of genotoxicity has been demonstrated in tests of mutagenicity, DNA damage and chromosome aberrations.

Chronic/Subchronic Toxicity Studies

Carfentrazone-ethyl: Not Available

Carcinogenicity

Carfentrazone-ethyl: In studies with laboratory animals, carfentrazone-ethyl did not cause reproductive toxicity, teratogenicity or carcinogenicity. An overall absence of genotoxicity has been demonstrated in tests of mutagenicity, DNA damage and chromosome aberrations.

Other Toxicity Information

None

Toxicity of Other Components

Calcium dodecylbenzene sulfonate (1 - 5%)

A severe eye irritant. May be mildly irritating to skin and mucous membranes. Low acute inhalation and oral toxicity.

Naphthalene (< 10%)

Test results reported in Section 11 for the final product take into account any acute hazards related to the naphthalene in the formulation.

Chronic overexposure to naphthalene can affect the liver, kidney, respiratory tract and blood.

Carcinogen Status:

NTP: Anticipated Carcinogen

IARC: Group 2B Possible Human Carcinogen

Petroleum Solvent

The supplier reports that high vapor/aerosol concentrations (> 1000 ppm) are irritating to the eyes and the respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects.

Target Organs

Active Ingredients

Carfentrazone-ethyl: Not Available

Inert Ingredients

Calcium dodecylbenzene sulfonate: Eye, skin

Naphthalene: Liver, kidney, respiratory tract, blood

Petroleum Solvent: Eye, respiratory tract, CNS

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Carfentrazone-ethyl:

Fish (general) LC50 1.6 to 2.0 mg/l

Algae (EC50) 5.7 to 17 ug/l

Aquatic Crustacea (LC50) > 9.8 mg/l

Bird Orally LD50 > 2250 mg/kg

Environmental Fate

Carfentrazone-ethyl:

The information presented here is for the active ingredient, carfentrazone-ethyl. Rapidly degraded in soil (DT50 <1.5 days) through microbial degradation, initially by hydrolysis to F8426-chloropropionic acid, and then through further side-chain degradation to other acids. Based on field studies, carfentrazone-ethyl and its major metabolite, F8426-chloropropionic acid, are confined to the top soil layer, indicating only slight mobility in soil. Material is hydrolytically unstable in base (half-life of 5.1 hours), with stability increasing with decreasing pH. It is susceptible to photolytic degradation in water, with a half-life of 8.3 days (pH 5). The Log Pow is 3.36 and the measured bioconcentration factor in whole fish is 159, both indicating a low potential for accumulation. Its vapor pressure is 1.19×10^{-7} torr, indicating that volatility is not a concern with this chemical.

13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Contains Naphthalene U165

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

Non-Bulk - Not regulated by US DOT.

Bulk:

Proper Shipping Name: Combustible liquid, N.O.S.

Technical Name: Aromatic hydrocarbons

Identification Number: NA 1993

Packing Group: PG III

Placard: Combustible

Marking: 1993

Reportable Quantity (RQ): Naphthalene - 100 lbs./45.4 kg

B/L Freight Classification

Herbicides, NOI

Comments

Water Transport - International
Not regulated.

Air Transport - International
Not regulated.

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard
Fire Hazard

Section 313 Toxic Chemicals: Naphthalene (< 10%) (CAS No. 91-20-3)

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

Naphthalene RQ 100 lb; Calcium dodecylbenzene sulfonate RQ 1000 lb

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2
Flammability: 2
Instability: 0

HMIS Hazard Ratings

Health: 2
Flammability: 2
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 8/19/2008

Revision Date: 12/9/2009

Replaces:

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS