

**SAFETY DATA SHEET  
DIRECT AG SOURCE, LLC  
FLAT TOP MC**

## **1. IDENTIFICATION**

<b>PRODUCT NAME:</b>	<b>FLAT TOP MC</b>
<b>EPA REGISTRATION NO. :</b>	83222-22
<b>CHEMICAL NAME OF ACTIVE INGREDIENT(S):</b>	Mepiquate Chloride: N, N-dimethylpiperidinium chloride
<b>PRODUCT TYPE:</b>	Plant Growth Regulatory
<b>COMPANY NAME:</b>	<b>Direct Ag Source, LLC</b>
	30473 260 <sup>th</sup> St.
	Eldora, IA 50627
	Phone: 1-800-424-9300
<b>FOR MEDICAL AND CHEMICAL EMERGENCIES, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL CHEMTREC:</b>	
<b>FOR EMERGENCY MEDICAL TREATMENT INFORMATION, CALL NATIONAL POISON CONTROL CENTER:</b>	Phone: 1-800-222-1222
<b>FOR PRODUCT INFORMATION, CALL NATIONAL PESTICIDE INFORMATION CENTER:</b>	Phone: 1-800-858-7378

## **2. HAZARDS IDENTIFICATIONS**

**THE FOLLOWING HAZARDS ARE IDENTIFIED ACCORDING TO OSHA HCS CLASSIFICATION (29 CFR 1910.1200).**

**HAZARD CLASSIFICATION:**

- Eye irritation: Category 2

**SIGNAL WORD:** WARNING

**PICTOGRAM:**



**HAZARD STATEMENT:**

- Cause eye irritation

**PRECAUTIONARY STATEMENT:**

- Wash hands thoroughly after handling. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice. Wear protective gloves and clothing. If on skin, wash with plenty of water. Call a poison center if you feel unwell. Take off contaminated clothing and wash it before reuse.

Contact CHEMTREC for emergency medical treatment at 1-800-424-9300.

**STORAGE AND DISPOSAL:** See Section 7 and 13.

**OTHER HAZARDS:** See Section 11 and 12.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%
Mepiquat Chloride	24307-26-4	4.2
Other Ingredients	NA	95.8

### 4. FIRST AID MEASURES

FIRST AID	
<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 eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Immediately call poison control center or doctor immediately for treatment advice.</li><li>• Have a person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<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 to 20 minutes.</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. For information on this product, contact the National Pesticide Information Center, 1-800-858-7278, Monday-Friday, 7:30 AM-3:30 PM PST. You may also contact the National Poison Control Center, 1-800-222-1222, day or night, for emergency medical treatment information.	

### 5. FIRE FIGHTING MEASURES

**FLASH POINT:** > 100°C

**AUTOIGNITION TEMPERATURE:** Not available

**FLAMMABLE LIMITS:** Not applicable

**EXTINGUISHING MEDIA:** Use foam, dry chemical, carbon dioxide or water spray.

**FIRE AND EXPLOSION HAZARDS:** Can release irritating and toxic gases in a fire resulting from thermal decomposition.

**FIRE FIGHTING PROCEDURES:** Evacuate nonessential personnel from the area and fight fire from upwind to prevent exposure to fire, smoke, fumes or products of combustion. Foam or dry chemical extinguishing systems are recommended. Water runoff may cause environmental damage and if water is used to fight a fire, dike and collect the runoff.

**PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:** Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition or combustion may produce hydrogen chloride and / or oxides of nitrogen.

### 6. ACCIDENTAL RELEASE MEASURES

**ACTION TO TAKE FOR SPILLS/LEAKS:** Control the spill at its source and contain the spill to prevent it from spreading or contaminating soil or from entering sewer and drainage systems or any body of water. Clean up spills immediately, observing the precautions outlined in Section 8 below.

**Small Spills:** Cover the entire spill with absorbing material and place into an appropriate disposal container. Rinse the area with water and pick up the rinse liquid with additional absorbent material and place into an

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appropriate disposal container. Once all material is cleaned up and placed in a disposal container, seal the container and arrange for disposal.

**Large Spills:** Dike large spills using absorbent or impervious material such as clay or sand. Recover and contain as much free liquid as possible for reuse. Allow any absorbed material to solidify and scrape up for disposal. After removal, flush contaminated area thoroughly with water, pick up wash liquid with additional absorbent material, and place in a disposal container.

## **7. HANDLING AND STORAGE**

**PRECAUTIONS TO BE TAKEN IN HANDLING:** Store in a well ventilated, cool, dry location and avoid excessive heat. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

**PRECAUTIONS TO BE TAKEN IN STORAGE:** Do not store below 32°F or above 100°F. Store in a dry place away from heat or open flame.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**GENERAL PROTECTIVE MEASURES:** Wash thoroughly with soap and water after handling. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**SKIN/HAND PROTECTION:** Coveralls over long-sleeved shirt and pants. Chemical-resistant gloves. Chemical – resistant footwear plus socks.

**EYE/FACE PROTECTION:** Protective eyewear.

**RESPIRATOR REQUIREMENTS:** None required. Use NIOSH approved air purifying respirator or filtering face piece with N or P class filter when working in non-ventilated areas.

**USER SAFETY RECOMMENDATIONS:**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove clothing immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENGINEERING CONTROLS:** See product label. Ensure adequate ventilation, especially in confined areas. Control airborne concentrations below the exposure guidelines.

**EXPOSURE LIMITS:** Not applicable.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Pink liquid

**ODOR:** Odorless

**ODOR THRESHOLD:** Not available

**pH:** 8 - 9

**FLASH POINT:** > 100°C

**DENSITY:** 8.35 lbs/gal

**WATER SOLUBILITY:** Completely soluble

**VISCOSITY:** Not available

**FLAMMABILITY (Solid, Gas):** Not applicable

**UPPER/LOWER FLAMMABILITY/EXPLOSIVE LIMITS:** Not available

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**AUTO-IGNITION TEMPERATURE:** Not available

**EXPLODABILITY:** Not applicable

**SOLUBILITY:** Not available

**PARTITION COEFFICIENT (n-OCTANOL/WATER):** Not available

**VAPOR PRESSURE:** Not available

**VAPOR DENSITY:** Not available

**MELTING POINT/FREEZING POINT:** Not applicable

**BOILING POINT:** Not available

**EVAPORATION RATE:** Not available

**DECOMPOSITION TEMPERATURE:** Not available

## **10. STABILITY AND REACTIVITY**

**STABILITY:** This product is stable under normal use and storage. May decomposed if heated.

**CONDITIONS TO AVOID:** Avoid excessive heat and fire.

**MATERIALS TO AVOID:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition or combustion may produce hydrogen chloride and / or oxides of nitrogen.

**HAZARDOUS POLYMERIZATION:** Not known to occur.

## **11. TOXICOLOGICAL INFORMATION**

### **ACUTE TOXICITY/IRRITATION STUDIES:**

Acute Oral LD <sub>50</sub> (Rat):	6,950 mg/kg
Acute Dermal LD <sub>50</sub> (Rat):	> 2,000 mg/kg
Acute Inhalation LC <sub>50</sub> (Rat):	20 mg/L (7-h)
Eye Irritation (rabbit):	Slightly irritating.
Skin Irritation (rabbit):	Slightly irritating.
Dermal Sensitization (Guinea Pig):	Not a skin sensitizer

**CHRONIC TOXICITY:** Mepiquat-chloride has been tested on mammals and in test-tube systems. No evidence of adverse mutagenic, oncogenic, teratogenic or reproductive effects was obtained.

**MUTAGENIC TOXICITY:** No evidence of mutagenic effects during *in vivo* and *in vitro* assays.

**REPRODUCTIVE TOXICITY:** Not known to cause reproductive or birth defects at normal exposure levels.

### **Carcinogenicity Assessment:**

ACGIH: Not listed

NTP : Not listed

IARC : Not listed

OSHA : Not listed

## **12. ECOLOGICAL INFORMATION**

**ENVIRONMENTAL HAZARDS:** Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

**ECOTOXICITY INFORMATION:** (Based on Mepiquat chloride technical)

Mepiquat chloride is not acutely toxic to fish or wildlife. High concentrations of this product may be toxic to fish and aquatic invertebrates. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

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Although mepiquat chloride is stable to hydrolysis and photolysis, it is rapidly decomposed in the environment by microbial breakdown into CO<sub>2</sub> (the half-life in soil ranged from 3 to 21 days). Mepiquat chloride is non-mobile in soils and it does not bioaccumulate.

**AQUATIC TOXICITY :**

Rainbow Trout (96-hr LC<sub>50</sub>): 4,300 mg/L

Daphnia (48-hr EC<sub>50</sub>): 68.5 mg/L

**AVIAN TOXICITY :**

Bobwhite Quail (Oral LD<sub>50</sub>): > 2,000 mg/kg

**13. DISPOSAL CONSIDERATIONS**

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess waste is a violation of federal law. 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 DISPOSAL:** Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

**14. TRANSPORT INFORMATION**

**US DOT:** Not regulated.

**IMDG:** Not regulated

**IATA:** Not regulated

**15. REGULATORY INFORMATION**

**FIFRA INFORMATION:**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

**CAUTION** Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

**SARA TITLE III CLASSIFICATION:**

Section 302: Not applicable.

Section 311/312: Acute health hazard (immediate)

Section 313: Not applicable

**RCRA CLASSIFICATION:** 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.

**TSCA STATUS:** All ingredients are listed on the TSCA inventory or are not required to be listed on the TSCA inventory.

**CA PROPOSITION 65:** Not applicable

This product contains less than 1% of chemical (Ethylene oxide) known to the State of California to cause birth defects of other reproductive harm.

**STATE RIGHT-TO-KNOW:**

<u>Chemical Name</u>	<u>CAS Number</u>	<u>List</u>
Mepiquat chloride	24307-26-4	NJ, PA

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<b>16. OTHER INFORMATION</b>
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NFPA HAZARD RATINGS		NFPA	
HEALTH:	1	0	MINIMAL
FLAMMABILITY:	1	1	SLIGHT
REACTIVITY:	0	2	MODERATE
		3	HIGH
		4	SEVERE

**SDS DATE:** 9-10-2015. Supersedes version dated 12-4-2007. Changes made to all sections.

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, or provincial, and local laws.