

SAFETY DATA SHEET

1. Identification:		
Product Identifier:	Citadel®	
Other Means of Identification:	EPA registration number 62097-21-82917	
Distributed by:	Fine Americas, Inc. 1850 Mt. Diablo Blvd., Suite 405, Walnut Creek, CA 94596, USA Tel: 925-932-8800	
Emergency Phone Number:	Chemtrec 1-800-424-9300 (24 hours)	
Recommended Use:	Plant growth regulator for use on ornamentals	
Restrictions on Use:	Keep out of reach of children	
2. Hazard(s) Identification (This product is not classified as hazardous as defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200):		
Class/Category:	Not Classified	
Route of Exposure:	Most likely exposure routes are dermal and oral.	
Hazards Not Otherwise Classified:	None known	
Signal word:	None	
Symbol(s):	None	
Hazard Statements:	None assigned	
Precautionary Statements:	Prevention: None assigned Response: None assigned Storage: None assigned Disposal: None assigned	
3. Composition: (Components classified as hazardous under 29 CFR 1910.1200)		
This product contains the following components classified as hazardous under 29 CFR 1910.1200		
CAS number:	Component:	Percent:
999-81-5	Chlormequat chloride	11.8%
68515-73-1	C8/C10 alkylpolyglucoside	5.1%
65-85-0	Benzoic acid	0.41%
The remainder of the mixture is not required to be disclosed by 29 CFR 1910.1200.		
4. First Aid Measures:		
Inhalation:	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 a poison control center or doctor for further treatment advice	
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 / attention.	
Skin:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice	
Ingestion:	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 a poison control center or doctor. Do not give anything to an unconscious person.	
Symptoms/Effects:	Acute: No available information Delayed: No available information	
Indication of immediate medical attention and special treatment needed, if necessary:	No available information	
5. Fire Fighting Measures:		
Extinguishing Media:	Suitable: Water mist, CO ₂ , foam or dry chemical Unsuitable: High power water jet	
Specific Hazards Arising from the	Avoid inhalation of combustion products. High temperature	

Chemical:	decomposition would be expected to liberate hydrogen chloride and alkylamines.				
Protective Equipment and Precautions for Firefighters:	Wear full protective clothing and self-contained breathing apparatus.				
6. Accidental Release Measures:					
Personal Precautions, Protective Equipment and Emergency Procedures:	Refer to Section 8 "Exposure controls/personal protection"				
Methods for Containment and Clean-Up:	<p>Clean up spill immediately. Absorb spill with inert material (such as dry sand or earth), the place in a chemical waste container. Wash area with soap and water. Pick up wash liquid with addition absorbent and place in a chemical waste container.</p> <p>Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.</p> <p>See also Section 13. Disposal Considerations.</p>				
7. Handling and Storage:					
Precautions for Safe Handling:	Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 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.				
Conditions for Safe Storage:	<p>Do not contaminate water, food or feed by storage or disposal. Keep containers tightly closed when not in use. Store in cool, dry place. Protect from temperatures below 32°F. This product may freeze. If freezing should occur, thaw and shake gently to mix the product. Do not store diluted product. Store in original container. Do not store below freezing temperatures.</p> <p>See also Section 10. Stability and Reactivity.</p>				
8. Exposure Controls/Personal Protection:					
Component Exposure Limits:					
Substance	OSHA PEL		Ca/OSHA PEL	NIOSH REL	ACGIH TLV
	ppm	Mg/m3	8-hr TWA (ST) STEL (C) Ceiling	Up to 10 hr TW (ST) STEL (C) Ceiling A	8-hr TWA (ST) STEL (C) Ceiling
No component listed	-	-	-	-	-
Appropriate Engineering Controls:	No applicable information available.				
Personal Protective Equipment:	<p>Eyes/Face: No applicable information available.</p> <p>Skin: Long-sleeved shirt and long pants. Shoes plus socks.</p> <p>Respiratory: No applicable information available.</p>				
9. Physical and chemical properties:					
Appearance:	Clear liquid with very pale straw color				
Odor:	Soapy				
Odor Threshold:	No data available				
pH:	4.22				
Melting Point/Freezing Point:	No data available				
Boiling Point:	>212°F (100°C)				
Flash Point:	Does not flash				
Evaporation Rate:	No data available				
Flammability/Limits:	<p>Not flammable</p> <p>LFL: not applicable</p> <p>UFL: not applicable</p>				

Vapor Pressure:	No data available
Vapor Density:	No data available
Relative Density:	1.025 g/ml at 68°F (20°C)
Solubility (H₂O):	Miscible
Partition Coefficient:	No data available
Auto-Ignition Temperature:	No data available
Decomposition Temperature:	No data available
Viscosity:	Between 1.1 and 2.0 cSt at 68°F

10. Chemical Stability and Reactivity Information:

Reactivity:	No applicable information available
Chemical Stability:	Stable in original containers for at least 2 years at ambient temperatures. (40-70°F)
Possibility of Hazardous Reactions:	No applicable information available
Conditions to Avoid:	Excessive heat. Do not store at temperatures below 32°F.
Incompatible Materials:	No applicable information available
Hazardous Decomposition Products:	No applicable information available

11. Toxicological Information:

Likely Routes of Exposure:	Most likely exposure by Dermal or oral route
Symptoms:	Inhalation: No data available Eye: Non-irritant Skin: Non-irritant Ingestion: No data available
Acute Toxicity:	Oral: LD ₅₀ Rat 2,000-5,000 mg/kg (EPA category III) Inhalation: LC ₅₀ Rat >5.0 mg/l (EPA category IV) Dermal: LD ₅₀ Rat >5,000 mg/kg (EPA category IV)
Skin Corrosion/Irritation:	Non-irritant
Serious Eye Damage/Eye Irritation:	Non-irritant
Sensitization:	Non-sensitizing
Germ Cell Mutagenicity:	No data available
Carcinogenicity:	None of the components of this product are listed as carcinogens by NTP, IARC or OSHA.
Reproductive/Developmental Toxicity:	No data available.
Specific Target Organ Toxicity:	Single Exposure: No data available Repeated Exposure: No data available

12. Ecological Information:

Ecotoxicity:			
	Species:	Exposure Time	LC50/EC50/IC50
	Fish (Mirror Carp and Rainbow Trout)	96 hr	LC50 >100 mg/l
	Daphnia	48 hr	EC50 >16.9 mg/l
	Algae	72 hr	EC ₅₀ >100 mg/L
	Bees – This product is non-toxic to bees	48 hr	LD50 >2250 mg/kg
Persistence and Degradability:	In soil the material is quickly degraded by microbial activity. It had no influence on soil microflora or fauna.		
Bioaccumulation Potential:	No data available.		
Mobility in Soil:	No data available.		
Other Adverse Effects:	None known		

13. Disposal Considerations:

Disposal Instructions:	Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Container disposal:
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	<p>5 gallons or less: Non-refillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. 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 flow begins to drip. Repeat this procedure two more times.</p> <p>Greater than 5 gallons: Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Triple 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. Empty the rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed be State and local authorities, by burning. If burned, stay out of smoke.</p>
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14. Transport Information:

UN Proper Shipping Name:	Not applicable
Hazard Class:	Not applicable
UN Number:	Not applicable
Packaging Group:	Not applicable
Marine Pollutant:	Not applicable
NMFC number/class:	101685/065 Plant growth inhibitor, modifier or regulator, NOIBN

15. Regulatory Information:

SARA: No reportable components	
CERCLA:	Chlomequat Chloride – Sect.302 TPQ 100/10000, Sect.304 RQ 100. Benzoic acid – CERCLA RQ 5000.
TSCA:	All components of this product are either listed or are exempt on the TSCA inventory. The following components of this product are subject to the reporting requirements of Section 12(b) of TSCA: None

Component Analysis – State:
 The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Chlomequat Chloride	999-81-5	-	-	-	✓	-	-
Benzoic acid	65-85-0	✓	-	-	✓	✓	-

California Prop 65: No component listed

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 required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

EPA signal word:	CAUTION
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Classifications under 40 CFR 156.63 are given in sections 9 and 11 where applicable	
Precautionary Statements:	HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
Pictograms/Symbols:	None
16. Other Information:	
<p>Fine Agrochemicals Limited ("FINE") warrants that this Product conforms to the specifications on this label. To the extent consistent with applicable law, FINE makes no other warranties and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for a particular purpose. No agent of FINE or any other person is authorized to make any representation or warranty beyond those contained herein.</p> <p>It is impossible to eliminate all risks associated with this Product. Plant injury, lack of performance, or other unintended consequences may result because of factors such as abnormal weather conditions, use of the Product other than in strict accordance with this label's instructions, presence of other materials, the manner of application or other factors, all of which are beyond the control of FINE or the seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.</p> <p>To the extent consistent with applicable law: 1) FINE disclaims any liability whatsoever for special, incidental or consequential damages resulting from the handling or use of this Product and 2) FINE's liability under this label shall be limited to the amount of the purchase price or, at the election of FINE, the free replacement of the Product.</p>	
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