Safety Data Sheet

Issue Date: 16-Sep-2011 **Revision Date:** 10-Dec-2013 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name Lemon CDD

Other means of identification

SDS # WC-012
Product Code #13

Recommended use of the chemical and restrictions on use

Recommended Use Liquid cleaner/disinfectant.

Details of the supplier of the safety data sheet

Supplier Address
Marko, Inc.
1310 Southport Rd.
Spartanburg, SC 29306

Emergency Telephone Number

Company Phone Number 864-585-2259
Emergency Telephone (24 hr) 864-585-2259

2. HAZARDS IDENTIFICATION

Appearance Yellow liquid **Physical State** Liquid **Odor** Lemon

Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1

Signal Word
Warning

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response
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/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash it before reuse
If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Didecyldimonium chloride	7173-51-5	Proprietary
Alkyl dimethyl benzyl ammonium chloride (C12-16)	68424-85-1	Proprietary
Citral	5392-40-5	Proprietary

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation Remove to fresh air.

Ingestion Drink large quantities of raw egg white or water. Do not induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and effects

Symptoms Skin contact may aggravate an existing dermatitis. Contact may cause irritation and redness.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Possible mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock and convulsions may be necessary.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water. Carbon dioxide (CO_2). Foam.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Non-flammable solution.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required. Remove all sources of ignition.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Soak up with inert absorbent material. Place in appropriate containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Wash thoroughly after handling. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Use only in well-ventilated areas.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from high heat and open flames. Do not contaminate food or feed stuffs.

Incompatible Materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Citral 5392-40-5	TWA: 5 ppm inhalable fraction and vapor S*	-	-

Appropriate engineering controls

Engineering Controls Local exhaust ventilation recommended.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear approved safety goggles.

Skin and Body Protection Wear suitable gloves.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Yellow liquid	**Odor**	Lemon
Color	Yellow	**Odor Threshold**	Not determined

Property	Values	Remarks • Method
pH	6-8	
Melting Point/Freezing Point	Not available	
Boiling Point/Boiling Range	Not available	
Flash Point	100 °C / 212 °F	Tag Open Cup
Evaporation Rate	Not available	
Flammability (Solid, Gas)	n/a-liquid	
Upper Flammability Limits	None	
Lower Flammability Limit	None	
Vapor Pressure	Not determined	
Vapor Density	Not available	
Specific Gravity	0.9964	(1=Water)
Water Solubility	Completely soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children.

Incompatible Materials
None known based on information supplied.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye irritation.

Skin Contact Causes skin irritation. May cause an allergic skin reaction.

Inhalation Avoid breathing vapors or mists.

Ingestion Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Didecyldimonium chloride 7173-51-5	= 84 mg/kg (Rat)	-	-
Nonylphenoxypoly-(Ethyleneoxy) Ethanol 26027-38-3	-	= 1800 µL/kg (Rabbit)	-
Alkyl dimethyl benzyl ammonium chloride (C12-16) 68424-85-1	= 426 mg/kg (Rat)	-	-
Citral 5392-40-5	= 4950 mg/kg (Rat)	> 2000 mg/kg (Rat) = 2250 mg/kg (Rabbit)	-
Tetrasodium EDTA 64-02-8	= 10 g/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause an allergic skin reaction.

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Citral 5392-40-5	16: 72 h Desmodesmus subspicatus mg/L EC50 19: 96 h Desmodesmus subspicatus mg/L EC50	4.6 - 10: 96 h Leuciscus idus mg/L LC50 static	EC50 = 2100 mg/L 30 min	7: 48 h Daphnia magna mg/L EC50
Tetrasodium EDTA 64-02-8	1.01: 72 h Desmodesmus subspicatus mg/L EC50	41: 96 h Lepomis macrochirus mg/L LC50 static 59.8: 96 h Pimephales promelas mg/L LC50 static		610: 24 h Daphnia magna mg/L EC50

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility

Chemical Name	Partition Coefficient
Citral 5392-40-5	2.76

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Nonylphenoxypoly-(Ethyleneoxy) Ethanol 26027-38-3		Included in waste stream: K060		

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories
Not determined

US Federal Regulations

SARA 313
Not determined

US State Regulations

U.S. State Right-to-Know Regulations
Not determined

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	Not determined	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	1	0	0	Not determined

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Disclaimer
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End of Safety Data Sheet