



SAFETY DATA SHEET

Product: MARC 33 LEMON DISINFECTANT

Form R04132

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER AND NAME: MARC 33 LEMON DISINFECTANT

SDS DATE: 09/01/16

SUPPLIER: Mid-American Research Chemical Corp. ADDRESS: P. O. Box 927 Columbus, NE 68602-0927
PHONE: 402-564-7104 FAX: 402-563-1290
EMERGENCY PHONE: InfoTrac 1-800-535-5053
E-MAIL: marc@marc1.com WEBSITE: www.marc1.com

RECOMMENDED USE: Broad-Spectrum Disinfectant Cleaner

PREPARED BY: MARC

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION:
Skin Irritant: 2
Eye Damage: 1
Skin Sensitivity: 1
Carcinogen: 2



SIGNAL WORD: DANGER

HAZARD STATEMENTS: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Suspected of causing cancer.

PRECAUTIONARY STATEMENTS: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist, spray. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear eye protection, protective clothing, protective gloves.

RESPONSE: IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Immediately call a POISON CENTER/doctor. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

STORAGE: Store locked up.

DISPOSAL: Dispose of contents/container in accordance with local/regional/national/international regulations.

POTENTIAL HEALTH EFFECTS: See Section 11 for more information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

NAME/INGREDIENT	CAS #	PERCENT	CLASSIFICATION (GHS-US)
Sodium Carbonate	497-19-8	1% - 5%	Eye Irrit. 2A, H319
Benzalkonium chloride	68391-01-5	1% - 5%	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Alkyl (68% C12, 32% C14) Dimethyl ethylbenzyl ammonium chloride	85409-23-0	1% - 5%	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Aquatic Chronic 1, H410
Tetrasodium ethylenediaminetetracetate	64-02-8	0.5% - 1.5%	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
(+)-limonene	5989-27-5	0.1% - 1%	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304



SAFETY DATA SHEET

Product: MARC 33 LEMON DISINFECTANT

Form R04132

Trisodium nitrilotriacetate	5064-31-3	0.1% - 1%	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Carc. 2, H351
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Specific chemical identity and /or percentage of composition has been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

FIRST AID MEASURES: If you feel unwell, seek medical advice (show the label where possible).

EYES: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Center or doctor/physician.

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

INGESTION: Rinse mouth. **DO NOT INDUCE VOMITING!** Consult a doctor/medical service if you feel unwell.

INHALATION: Remove person to fresh air and keep at rest in a position comfortable for breathing. .

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

SYMPTOMS INJURIES: Causes severe burns and eye damage. May cause an allergic skin reaction.
May cause cancer.

SYMPTOMS AFTER EYE CONTACT: Causes serious eye damage. Corrosion of the eye tissue. Permanent eye damage.

SYMPTOMS AFTER SKIN CONTACT: Caustic burns/corrosion of the skin. May cause allergic skin reaction.
Repeated exposure may cause skin dryness or cracking.

SYMPTOMS AFTER INGESTION: Burns to the gastrointestinal mucosa. Gastrointestinal complaints.
Nausea, diarrhea, cramps.

SYMPTOMS AFTER INHALATION: May cause respiratory irritation.

INDICATION OF ANY IMMEDIATE MEDICAL

ATTENTION AND SPECIAL TREATMENT NEEDED: Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: All extinguishing media allowed.

SPECIAL FIRE FIGHTING PROCEDURES: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.

SPECIAL PROTECTIVE EQUIPMENT & PRECAUTIONS FOR FIREFIGHTERS: Do not enter fire without proper protective equipment, including respiratory protection.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Upon combustion: CO and CO₂ are formed.

HAZARDOUS DECOMPOSITION PRODUCTS: Under normal conditions of storage and use, hazardous decomposition products should not be produced.



SAFETY DATA SHEET

Product: MARC 33 LEMON DISINFECTANT

Form R04132

SECTION 6: ACCIDENTAL RELEASE MEASURES

- GENERAL MEASURES:** Isolate from fire, if possible, without unnecessary risk.
- FOR NON-EMERGENCY PERSONNEL:** Safety glasses, gloves, protective clothing. Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Ventilate spillage area.
- EMERGENCY RESPONDERS/ EMERGENCY PROCEDURES:** Keep unauthorized personnel away. Equip cleanup crew with proper protection. Stop leak if safe to do so. Stop release. Ventilate area.
- ENVIRONMENTAL PRECAUTIONS:** Avoid release to the environment. Prevent soil and water pollution.
- PROTECTIVE EQUIPMENT:** Use personal protective devices as stated in Section 8.
- METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP:**
- FOR CONTAINMENT:** Contain released substance, pump into suitable containers.
- METHODS FOR CLEANING UP:** This material and its container must be disposed of in a safe way, and as per local legislation.

SECTION 7: HANDLING AND STORAGE

- PRECAUTIONS FOR SAFE HANDLING:** Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes, on skin, or on clothing.
- HYGIENE MEASURES:** Wash thoroughly after handling. Wash contaminated clothing before reuse.
- OTHER PRECAUTIONS:** **KEEP OUT OF REACH OF CHILDREN!! CAREFULLY READ ENTIRE LABEL BEFORE USE!**
- STORAGE:** Store in original container. Keep container closed when not in use. Protect from freezing. Store in a dry place in original container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).
- INCOMPATIBLE PRODUCTS:** Strong acids.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- EXPOSURE CONTROLS:**
- PERSONAL PROTECTIVE EQUIPMENT:** Use appropriate personal protective equipment when risk assessment indicates this is necessary.
- ENGINEERING CONTROLS/ VENTILATION:**
- RESPIRATORY PROTECTION:** In case of insufficient ventilation, wear suitable respiratory equipment.
- EYES AND FACE PROTECTION:** Wear safety glasses.
- SKIN PROTECTION/PROTECTIVE GLOVES:** Wear appropriate gloves.
- OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Wear appropriate protective clothing.
- WORK HYGIENIC PRACTICES:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants.



SAFETY DATA SHEET

Product: MARC 33 LEMON DISINFECTANT

Form R04132

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE-	
PHYSICAL STATE:	Liquid
COLOR:	Clear, Yellow
ODOR:	Lemon-like
ODOR THRESHOLD:	No data available.
pH:	11.5 – 12.5
MELTING/FREEZING POINT:	No data available.
BOILING POINT:	No data available.
FLASH POINT/METHOD USED:	>200°F Closed Cup
RELATIVE EVAPORATION RATE:	No data available.
FLAMMABILITY (solid, gas):	No data available.
EXPLOSIVE LIMITS:	No data available.
EXPLOSIVE PROPERTIES:	No data available.
OXIDIZING PROPERTIES:	No data available.
VAPOR PRESSURE (mmHg):	No data available.
RELATIVE DENSITY:	No data available.
RELATIVE VAPOR DENSITY AT 20°C:	No data available.
SPECIFIC GRAVITY/DENSITY:	1.04 g/ml
SOLUBILITY:	Soluble in water.
LOG POW:	No data available.
LOG KOW:	No data available.
AUTO-IGNITION TEMPERATURE:	No data available.
DECOMPOSITION TEMPERATURE:	No data available.
VISCOSITY:	No data available.
VISCOSITY, KINEMATIC:	No data available.
VISCOSITY, DYNAMIC:	No data available.
VOC CONTENT:	<1%

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Upon combustion: CO and CO₂ are formed.

CHEMICAL STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: No additional information available.

POSSIBILITY OF HAZARDOUS REACTIONS: Same as REACTIVITY above.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong acids.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

HAZARDOUS POLYMERIZATION: N/A

CONDITIONS TO AVOID (POLYMERIZATION): NA



SAFETY DATA SHEET

Product: MARC 33 LEMON DISINFECTANT

Form R04132

SECTION 11: TOXICOLOGICAL INFORMATION

(+)-limonene (5989-27-5)	
LD50 oral rat	4400 mg/kg body weight (Rat: OECD 423: Acute Oral Toxicity – Acute Toxic Class Method: Literature study; >2000 mg/kg bodyweight; Rat; Read-across)
LD50 dermal rabbit	>5000 mg/kg bodyweight (Rabbit; Weight of evidence; Equivalent or similar to OECD 402)
ATE CLP (oral)	4400.000 mg/kg body weight

Sodium Carbonate (497-19-8)	
LD50 oral rat	2800 mg/kg (Rat: Experimental value)
LD50 dermal rabbit	>2000 mg/kg bodyweight (Rabbit: Experimental value)
ATE CLP (oral)	2800 mg/kg body weight

Tetrasodium ethylenediaminetetracetate (64-02-8)	
LD50 oral rat	>2000 mg/kg (Rat)
ATE CLP (oral)	500.000 mg/kg body weight

Trisodium nitrilotriacetate (5064-31-3)	
LD50 oral rat	1740 mg/kg rat, male and female
LD50 dermal rabbit	>2000 mg/kg
ATE CLP (oral)	500.000 mg/kg body weight

SERIOUS EYE DAMAGE/IRRITATION: Causes serious eye damage.
pH: 11.5 – 12.5

SKIN CORROSION/IRRITATION: Causes skin irritation.
pH: 11.5 – 12.5

RESPIRATORY OR SKIN SENSITIZATION: May cause an allergic skin reaction.

GERM CELL MUTAGENICITY: Not classified.

CARCINOGENICITY: Suspected of causing cancer.

(+)-limonene (5989-27-5)	
IARC group	3 – Not Classifiable

Trisodium nitrilotriacetate (5064-31-3)	
IARC group	2B – Possibly Carcinogenic to Humans

REPRODUCTIVE TOXICITY: Not classified.

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE): Not classified.

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): Not classified.

ASPIRATION HAZARD: Not classified.

SYMPTOMS AFTER INHALATION: May cause respiratory irritation.

SYMPTOMS AFTER SKIN CONTACT: Caustic burns/corrosion of the skin. May cause allergic skin reaction. Repeated exposure may cause skin dryness or cracking.

SYMPTOMS AFTER EYE CONTACT: Causes serious eye damage. Corrosion of the eye tissue. Permanent eye damage.

SYMPTOMS AFTER INGESTION: Burns to the gastric/intestinal mucosa. Gastrointestinal complaints. Nausea, diarrhea, cramps



SAFETY DATA SHEET

Product: MARC 33 LEMON DISINFECTANT

Form R04132

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:

(+)-limonene (5989-27-5)	
LC50 fish 1	720 µg/l (96 h; Pimephales promelas; Lethal)
EC50 Daphnia 1	0.36 mg/l (48 h; Daphnia magna; GLP)
LC50 fish 2	702 µg/l (96 h; Pimephales promelas)
Threshold limit algae 1	150 mg/l (72 h; Desmodesmus subspicatus; GLP)
Threshold limit algae 2	2.62 mg/l (72 h; Desmodesmus subspicatus)

Sodium Carbonate (497-19-8)	
LC50 fish 1	300 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 1	<424 mg/l (48 h; Daphnia magna)
EC50 other aquatic organisms 1	14 mg/l (168 h; Plankton)
LC50 fish 2	740 mg/l (96 h; Gambusia affinis)
EC50 Daphnia 2	265 mg/l (48 h; Daphnia magna)
TLM fish 1	300 ppm (96 h; Lepomis macrochirus)
TLM other aquatic organisms 1	500 ppm (96 h; Daphnia magna)
Threshold limit algae 1	242 mg/l (5 days; Algae)

Tetrasodium ethylenediaminetetracetate (64-02-8)	
LC50 fish 1	121 mg/l (96 h; Lepomis macrochirus; Soft water)
EC50 Daphnia 1	625 mg/l (24 h; Daphnia magna)
LC50 fish 2	374-792 mg/l (96 h; Lepomis macrochirus; pH >7)
Threshold limit algae 1	>100 mg/l (72 h; Scenedesmus subspicatus; Growth)

Trisodium nitrilotriacetate (5064-31-3)	
LC50 fish 1	114 mg/l Pimephales promelas (fathead minnow); Test Type: flow-through test.
EC50 Daphnia 1	>100 mg/l Daphnia magna (Water flea); Test Type: static test
ErC50 (algae)	91.5 mg/l Desmodesmus subspicatus (green algae); Exposure time: 72 h; Test Type: static test; Method: OECD Test Guideline 201

PERSISTENCE AND DEGRADABILITY:

(+)-limonene (5989-27-5)	
Persistence and Degradability	Readily biodegradable in water. Forming sediments in water. Absorbs into the soil.
ThOD (Theoretical Oxygen Demand)	3.29 g CO ₂ □ /g substance

Sodium Carbonate (497-19-8)	
Persistence and Degradability	Biodegradability: not applicable. Low potential for absorption in soil.
ThOD	Not applicable (inorganic)

Tetrasodium ethylenediaminetetracetate (64-02-8)	
Persistence and Degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	<0.002 g CO ₂ □ /g substance
Chemical oxygen demand (COD)	0.54 – 0.58 g CO ₂ □ /g substance

BIOACCUMULATION POTENTIAL :

(+)-limonene (5989-27-5)	
BCF fish 1	864.8 – 1022 (Pisces; Fresh weight)
Log Pow	4.38 (Experimental value; OECD 117: Partition Coefficient (n-octanol/water, HPLC method; 37°C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≤ Log Kow ≤ 5).



SAFETY DATA SHEET

Product: MARC 33 LEMON DISINFECTANT

Form R04132

Sodium Carbonate (497-19-8)	
Log Pow	-6.19 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow <4).

Tetrasodium ethylenediaminetetracetate (64-02-8)	
Log Pow	-2.6
Bioaccumulative potential	Bioaccumulation; not applicable.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS: **RECOMMENDATIONS:** Dispose in a safe manner in accordance with local/national regulations

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION (for ground/non-bulk containers)

CONTAINER SIZES(S): GALLONS, PAILS
PROPER SHIPPING NAME: DEODORANTS OR DISINFECTANTS, N.O.I. LIQUID/DRY
HAZARD CLASS: NONE
ID NUMBER: NONE
PACKING GROUP: NONE
LABEL STATEMENT: NONE

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

California Proposition 65 – This product contains, or may contain, trace quantities of a substance(s) known to the State of California to cause cancer and/or reproductive toxicity.

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 as required on the pesticide label:

DANGER: CORROSIVE. Causes irreversible eye damage and skin burns. Do not get in eyes, on skin or on clothing. Wear goggles or face shield, rubber gloves, and protective clothing. Harmful if inhaled. Remove contaminated clothing and wash before reuse. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.



SAFETY DATA SHEET

Product: MARC 33 LEMON DISINFECTANT

Form R04132

SECTION 16: OTHER INFORMATION

HMIS/NFPA Ratings: Health = 2
Flammability = 0
Reactivity = 0
Other = -
Protection = -

REVISION DATE: 09/01/16

DISCLAIMER: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Our company assumes no responsibility for personal injury or property damage to the vendee, users or third parties caused by the material. Such vendees or users assume all risks associated with the use of this material.