

SECTION 1: Product and company identification

Product name : Lemocide Disinfectant
Use of the substance/mixture : Disinfectant
Product code : 0173
Company : Total Solutions
P.O. Box 240014
Milwaukee, WI 53224 - USA
T 800-743-6417
athea.com
Contact: Technical Department
Emergency number : Chemtrec: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification
Acute Tox. 4 (Inhalation:dust,mist) H332
Skin Irrit. 2 H315
Eye Dam. 1 H318
Skin Sens. 1 H317
Carc. 2 H351
STOT SE 2 H371

2.2. Label elements

GHS US labelling
Hazard pictograms (GHS US)



GHS05 GHS07 GHS08

Signal word (GHS US)
Hazard statements (GHS US)

: Danger
: Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye damage.
Harmful if inhaled.
Suspected of causing cancer.
May cause damage to organs.
Precautionary statements (GHS US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, spray.
Avoid breathing mist, spray.
Wash thoroughly after handling
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear eye protection, protective clothing, protective gloves.
If on skin: Wash with plenty of water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
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: Call a poison center or doctor.
If exposed or concerned: Get medical advice/attention.
Immediately call a POISON CENTER, a doctor.
Call a doctor, a POISON CENTER if you feel unwell.
Specific treatment (see First aid measures on this label).
If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container to comply with local/regional/national/international regulations..

2.3. Other hazards

No additional information available

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2.4. Unknown acute toxicity (GHS US)

Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
C12-15 Alcohols Ethoxylated	(CAS-No.) 68131-39-5	1-5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Sodium Carbonate	(CAS-No.) 497-19-8	1-5	Eye Irrit. 2, H319
Alkyl C12-18 Dimethylbenzyl Ammonium Chloride	(CAS-No.) 68391-01-5	1-5	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1B, H314 STOT SE 2, H371 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Alkyl C12-14 Dimethylethylbenzyl Ammonium Chloride	(CAS-No.) 85409-23-0	1-5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Aquatic Chronic 1, H410
Tetrasodium EDTA	(CAS-No.) 64-02-8	0.5-1.5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Ethanol	(CAS-No.) 64-17-5	0.1-1.0	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 Carc. 1A, H350 STOT SE 3, H336
d-Limonene	(CAS-No.) 5989-27-5	0.1-1.0	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
Trisodium NTA	(CAS-No.) 5064-31-3	0.1-1.0	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Carc. 2, H351

All hazardous chemicals, as determined by 29 CFR 1910.1200 have been listed. A specific chemical identity and/or percentage of composition has been withheld as a trade secret. Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: Take off contaminated clothing and wash it before reuse. Wash with plenty of water/.... If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Consult a doctor/medical service if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Causes skin irritation. May cause an allergic skin reaction. May cause cancer. May cause damage to organs. Causes serious eye damage. Harmful if inhaled.
Symptoms/effects after inhalation	: Harmful if inhaled.
Symptoms/effects after skin contact	: May cause an allergic skin reaction. Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye damage. Corrosion of the eye tissue. Permanent eye damage.
Symptoms/effects after ingestion	: Burns to the gastric/intestinal mucosa. Gastrointestinal complaints. Nausea. Diarrhea. Cramps.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : All extinguishing media allowed.

5.2. Special hazards arising from the substance or mixture

Reactivity : Upon combustion: CO and CO₂ are formed.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Take account of environmentally hazardous firefighting water.
 Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Gloves. Protective clothing.
 Emergency procedures : Evacuate unnecessary personnel. Avoid contact with skin, eyes and clothing. Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
 Emergency procedures : Stop leak if safe to do so. Stop release. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent soil and water pollution.

6.3. Methods and material for containment and cleaning up

For containment : Contain released product, collect/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.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.
 Storage conditions : Keep container closed when not in use. Store in original container. Protect from freezing.
 Incompatible products : Strong acids.
 Storage area : Keep only in the original container. Store in a dry area. Store in a cool area.
 Special rules on packaging : meet the legal requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Alkyl C12-18 Dimethylbenzyl Ammonium Chloride (68391-01-5)

Not applicable

Ethanol (64-17-5)

ACGIH	ACGIH OEL STEL [ppm]	1000 ppm
ACGIH	Remark (ACGIH)	URT irr
OSHA	OSHA PEL TWA [1]	1900 mg/m ³
OSHA	OSHA PEL TWA [2]	1000 ppm

Alkyl C12-14 Dimethylethylbenzyl Ammonium Chloride (85409-23-0)

Not applicable

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Sodium Carbonate (497-19-8)

Not applicable

Tetrasodium EDTA (64-02-8)

Not applicable

Trisodium NTA (5064-31-3)

Not applicable

C12-15 Alcohols Ethoxylated (68131-39-5)

Not applicable

d-Limonene (5989-27-5)

Not applicable

8.2. Exposure controls

Personal protective equipment : Use appropriate personal protective equipment when risk assessment indicates this is necessary. Safety glasses. Gloves. Protective clothing.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state	: Liquid
Appearance	: clear, Yellow liquid
Odour	: lemon-like
Odour threshold	: No data available
pH	: 11 – 14
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 200 °F Closed Cup
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Vapour pressure	: No data available
Relative density	: No data available
Relative vapour density at 20 °C	: No data available
Density	: 1.04 g/ml
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (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**10.1. Reactivity**Upon combustion: CO and CO₂ are formed.**10.2. Chemical stability**

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Ethanol (64-17-5)	
LD50 oral rat	10470 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 15800 mg/kg bodyweight (Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	124.7 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))
ATE CLP (oral)	10740 mg/kg bodyweight

Sodium Carbonate (497-19-8)	
LD50 oral rat	2800 mg/kg (Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg (16 CFR 1500.40, 24 h, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	(2 h, Rat, Male, Experimental value)
ATE CLP (oral)	2800 mg/kg bodyweight
ATE CLP (vapours)	2.3 mg/l/4h
ATE CLP (dust,mist)	2.3 mg/l/4h

Tetrasodium EDTA (64-02-8)	
LD50 oral rat	1780 – 2000 mg/kg (Rat, Male / female, Experimental value, Oral)
ATE CLP (oral)	500 mg/kg bodyweight

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

C12-15 Alcohols Ethoxylated (68131-39-5)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

d-Limonene (5989-27-5)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Read-across, Dermal, 7 day(s))

Skin corrosion/irritation : Causes skin irritation.
pH: 11 – 14

Serious eye damage/irritation : Causes serious eye damage.
pH: 11 – 14

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Ethanol (64-17-5)	
IARC group	1 - Carcinogenic to humans

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Trisodium NTA (5064-31-3)	
IARC group	2B - Possibly carcinogenic to humans

d-Limonene (5989-27-5)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
STOT-single exposure	: May cause damage to organs.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: Harmful if inhaled.
Symptoms/effects after skin contact	: May cause an allergic skin reaction. Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye damage. Corrosion of the eye tissue. Permanent eye damage.
Symptoms/effects after ingestion	: Burns to the gastric/intestinal mucosa. Gastrointestinal complaints. Nausea. Diarrhea. Cramps.
Likely routes of exposure	: Skin and eyes contact; Inhalation

SECTION 12: Ecological information

12.1. Toxicity

Ethanol (64-17-5)	
LC50 - Fish [1]	15300 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)

Sodium Carbonate (497-19-8)	
LC50 - Fish [1]	300 mg/l (96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	200 – 227 mg/l (48 h, Ceriodaphnia sp., Semi-static system, Fresh water, Experimental value, Locomotor effect)

Tetrasodium EDTA (64-02-8)	
LC50 - Fish [1]	121 mg/l (US EPA, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Soft water)
EC50 - Crustacea [1]	625 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 100 mg/l (EU Method C.3, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Weight of evidence, Nominal concentration)

Trisodium NTA (5064-31-3)	
LC50 - Fish [1]	114 mg/l Pimephales promelas (fathead minnow); Test Type: flow-through test
EC50 - Crustacea [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

C12-15 Alcohols Ethoxylated (68131-39-5)	
LC50 - Fish [1]	5 – 10 mg/l Fish
EC50 - Crustacea [1]	5 – 10 mg/l Daphnia
ErC50 algae	10 – 100 mg/l Algae

d-Limonene (5989-27-5)	
LC50 - Fish [1]	720 µg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 - Crustacea [1]	0.307 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP)
ErC50 algae	0.32 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

Ethanol (64-17-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.

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Biochemical oxygen demand (BOD)	0.8 – 0.967 g O ₂ /g substance
Chemical oxygen demand (COD)	1.7 g O ₂ /g substance
ThOD	2.1 g O ₂ /g substance
BOD (% of ThOD)	0.43

Sodium Carbonate (497-19-8)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

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

d-Limonene (5989-27-5)	
Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O ₂ /g substance

12.3. Bioaccumulative potential

Ethanol (64-17-5)	
BCF - Fish [1]	1 (Other, 72 h, Cyprinus carpio, Static system, Fresh water, Read-across)
Partition coefficient n-octanol/water (Log Pow)	-0.31 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

Sodium Carbonate (497-19-8)	
Bioaccumulative potential	Not bioaccumulative.

Tetrasodium EDTA (64-02-8)	
BCF - Fish [1]	1.1 – 1.8 (28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	-13.17 (Estimated value, KOWWIN)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

d-Limonene (5989-27-5)	
BCF - Fish [1]	864.8 l/kg (BCFBAF v3.01, Pisces, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.38 (Experimental value, Equivalent or similar to OECD 117, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 ≤ Log Kow ≤ 5).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT : Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

EPA Registration Number: 1389-95

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

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 swallowed. Remove contaminated clothing and wash before reuse. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

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.

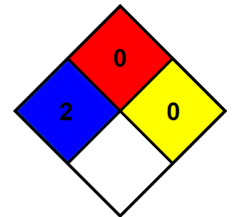
⚠ WARNING

This product can expose you to Formaldehyde, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

- NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
- NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
- NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Prepared by: Technical Department

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.