



Aqua Chemical Supply, Inc.

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1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier Clean & Perfect
 Other means of identification Not available
 Recommended use Cleaner
 Recommended restrictions None known.
 Manufacturer/Supplier/Distributor:
 Natural Chemistry L.P.
 40 Richards Ave.
 Norwalk, CT 06854 US
 Emergency telephone number: For emergency assistance involving chemicals call
 CHEMTREC day or night at: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Physical hazards Not classified.
 Health hazards Serious eye damage/eye irritation Category 2A
 Sensitization, skin Category 1
 Environmental hazards Not classified.
 OSHA defined hazards Not classified.
 Label elements



Signal word Warning
 Hazard statement May cause an allergic skin reaction. Causes serious eye irritation.
 Precautionary statement
 Prevention Avoid breathing mist or vapor. Wear eye/face protection. Wear protective gloves. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
 Response If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
 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.
 Storage Store away from incompatible materials.
 Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.
 Hazard(s) not otherwise classified (HNOC)
 None known.
 Supplemental information Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture	Chemical name	Common name and synonyms	CAS number	%
	Tetrasodium ethylenediamine tetraacetate		64-02-8	2.04
	Ethoxylated nonyl phenol		9016-45-9	1.98
	d-Limonene		5989-27-5	0.9

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists

Ingestion Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media Dry chemical. Water spray. Carbon dioxide. Foam.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

Hazardous combustion products May include and are not limited to: Oxides of carbon. Oxides of nitrogen.

Explosion data

Sensitivity to mechanical impact Not available.

Sensitivity to static discharge Not available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
This product is miscible in water. Stop the flow of material, if this is without risk.

Large Spills: Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas.

Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground

7. HANDLING AND STORAGE

Precautions for safe handling Avoid breathing mist or vapor. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
d-Limonene (CAS5989-27-5)	TWA	165.5 mg/m ³ 30 ppm

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	As required by employer code.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Not applicable.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear
Physical state	Liquid.
Form	Liquid.
Color	Pale yellow
Odor	Citrus
Odor threshold	Not available.
pH	10 - 12
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	1 - 1.02
Partition coefficient (n-octanol/water)	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not available.
Flammability limit – upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	8.3 - 8.5 lb/gal
Solubility(ies)	Complete
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available

10. STABILITY AND REACTIVITY

Reactivity	Reacts vigorously with acids. This product may react with oxidizing agents.	
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.	
Chemical stability	Material is stable under normal conditions. Conditions to avoid	
Contact with incompatible materials.	Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen.	

11. TOXICOLOGICAL INFORMATION

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	Expected to be a low ingestion hazard.
Inhalation	No adverse effects due to inhalation are expected.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause an allergic skin reaction. Dermatitis. Rash.

Information on toxicological effects		
Acute toxicity May cause an allergic skin reaction.		
Components	Species	Test Results
d-Limonene (CAS 5989-27-5)		
Acute		
Dermal LD50	Rabbit	> 5000 mg/kg
Oral LD50		
Ethoxylated nonyl phenol (CAS 9016-45-9)		
Acute		
Dermal LD50	Rabbit	2830 mg/kg
		1780 mg/kg
Oral LD50	Rat	2590 mg/kg
		1310 mg/kg
Tetrasodium ethylenediamine tetraacetate (CAS 64-02-8)		
Acute		
Dermal LD50	Not available	
Inhalation LC50	Not available	
Oral LD50	Rat	1658 mg/kg
Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.		
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	
Serious eye damage/eye irritation Causes serious eye irritation.		
Corneal opacity value	Not available.	
Iris lesion value	Not available.	
Conjunctival reddening value	Not available.	
Conjunctival oedema value	Not available.	
Recover days	Not available	
Respiratory or skin sensitization		
Respiratory sensitization	Not classified.	
Skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. IARC Monographs. Overall Evaluation of Carcinogenicity		
d-Limonene (CAS 5989-27-5)	Volume 73 - 3 Not classifiable as to carcinogenicity to humans.	
Reproductive toxicity This product is not expected to cause reproductive or developmental effects.		
Teratogenicity Not classified.		
Specific target organ toxicity - single exposure Not classified		
Specific target organ toxicity - repeated exposure Not classified.		
Aspiration hazard Not classified.		
Chronic effects Not classified.		
Further information Not available.		
Name of Toxicologically Synergistic Products Not available.		

12. ECOLOGICAL INFORMATION

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. See below		
Components	Species	Test Results
d-Limonene (CAS 5989-27-5)		
Aquatic		
Crustacea	EC50	Water flea (<i>Daphnia pulex</i>) 69.6 mg/l, 48 hours
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) 0.619 - 0.796 mg/l, 96 hours
Ethoxylated nonyl phenol (CAS 9016-45-9)		

Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	12.2 mg/l, 48 hours
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	1 - 1.8 mg/l, 96 hours
Tetrasodium ethylenediamine tetraacetate (CAS 64-02-8)			
Algae	EC50	Algae	1.01 mg/L, 72 Hours
Aquatic			
Fish	EC50	Water flea (<i>Daphnia magna</i>)	610 mg/l, 24 hours
Crustacea	LC50	Bluegill (<i>Lepomis macrochirus</i>)	472 - 500 mg/l, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available. Mobility in soil		No data available.
Mobility in general	Not available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

13. DISPOSAL CONSIDERATION

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Dispose of contents/container in accordance with local/regional/national/international regulations.	
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)	Not regulated as dangerous goods.
Transportation of Dangerous Goods (TDG - Canada)	Not regulated as dangerous goods

15. REGULATORY INFORMATION

Canadian federal regulations	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.	
Canada CEPA Schedule I: Listed substance: Ethoxylated nonyl phenol (CAS 9016-45-9)		Listed.
Canada NPRI VOCs with Additional Reporting Requirements: Mass reporting threshold/Identification Number d-Limonene (CAS 5989-27-5)	1 TONNES	
Canada Priority Substances List (Second List): Listed substance Ethoxylated nonyl phenol (CAS 9016-45-9)		Listed.
Canada WHMIS Ingredient Disclosure: Threshold limits d-Limonene (CAS 5989-27-5)	1 %	
WHMIS status	Controlled	
WHMIS classification	Class D - Division 2B	
WHMIS labeling		



US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.			
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)				Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)				Not listed.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)				Not regulated.
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List				Not regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories				
Immediate Hazard – Yes	Delayed Hazard – Yes	Fire Hazard - No	Pressure Hazard - No	Reactivity Hazard - No
SARA 302 Extremely hazardous substance		No		
SARA 311/312 Hazardous chemical		No		

SARA 313 (TRI reporting)	Not regulated.	
Other federal regulations		
Safe Drinking Water Act (SDWA)	Not regulated.	
Food and Drug Administration (FDA)	Not regulated.	
US state regulations	California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.	
US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance	Not listed.	
US - Texas Effects Screening Levels: Listed substance		
d-Limonene (CAS 5989-27-5)	Listed.	
Ethoxylated nonyl phenol (CAS 9016-45-9)	Listed.	
Tetrasodium ethylenediamine tetraacetate (CAS64-02-8)	Listed.	
US. Massachusetts RTK - Substance List	Not regulated.	
US. Pennsylvania RTK - Hazardous Substances	Not regulated.	
US. Rhode Island RTK	Not regulated.	
Inventory status		
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

16. OTHER INFORMATION

Notice

Aqua Chemical Supply, Inc. expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Aqua Chemical Supply, Inc. sales office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Aqua Chemical Supply, Inc. makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Aqua Chemical Supply, Inc.'s control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.

This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.