

SECTION I - PRODUCT AND COMPANY IDENTIFICATION

Manufacturer: Spectrum Aquatics
7100 Spectrum Lane
Missoula, MT 59808
800.791.8056

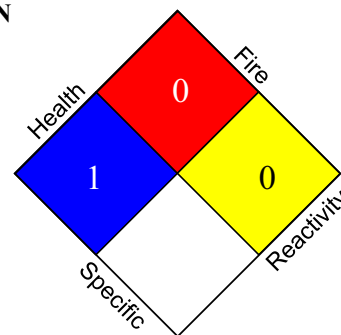
EMERGENCY TELEPHONE: 1-800-535-5053 USA & Canada
24 hr INFOTRAC 1-352-323-3500 International

Trade Name: Spectra Clean System 2
Product Use/Class: Specialty Cleaner

SECTION II - HAZARDS IDENTIFICATION

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

B: Safety glasses, gloves



*****EMERGENCY OVERVIEW***:** Harmful if swallowed. May cause eye burns or skin irritation.

Effects of Overexposure - Eye Contact: Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes. May cause permanent eye damage if not treated immediately.

Effects of Overexposure - Skin Contact: Prolonged or repeated exposures can irritate or burn skin. Reaction may be more severe if there is skin abrasion(s). Allergic sensitization in susceptible individuals is possible.

Effects of Overexposure - Inhalation: Inhalation is not an expected hazard unless misted or heated to high temperatures. Prolonged mist or vapor inhalation may cause irritation to the nose, throat, and upper respiratory tract. Severe exposures can lead to a chemical pneumonitis.

Effects of Overexposure - Ingestion: Irritating to mouth, throat and stomach. May cause discomfort, nausea, vomiting, diarrhea if swallowed.

Effects of Overexposure - Chronic Hazards: Repeated skin contact may cause a persistent irritation or dermatitis. Erosion of tooth enamel is possible from long-term overexposure.

Primary Routes of Entry: Skin contact, skin absorption, inhalation, ingestion, eye contact

Hazard classifications:
Eye irritation 2A

SECTION II - HAZARDS IDENTIFICATION (continued)

Hazard statements: Warning
 H303 May be harmful if swallowed
 H316 Causes mild skin irritation
 H319 Causes serious eye irritation



Precautionary statements:

P281 Use personal protective equipment as required.
 P301 + P312 If swallowed: Call a poison center or doctor/physician if you feel unwell.
 P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.

SECTION III - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Item</u>	<u>Chemical Name</u>	<u>CAS No.</u>	<u>% By Wt. (less than)</u>
01	Citric Acid	77-92-9	15%
-	Non-hazardous Ingredients	-	Balance

Citric Acid is "Generally Recognized as Safe" (GRAS) as a general food additive per 21 CFR 184.1033
 Non hazardous ingredients in this product are considered non hazardous under the Federal Hazard Communication Standard 29 CFR 1910.1200. All ingredients are on the U.S. TSCA Inventory.

Exposure Limits:

<u>Item</u>	<u>TLV-TWA</u>	<u>TLV-STEL</u>	<u>PEL-TWA</u>	<u>PEL-CEILING</u>	<u>SKIN</u>
01	N.E.	N.E.	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

SECTION IV - FIRST AID MEASURES

First Aid - Eye Contact: Remove contact lenses. IMMEDIATELY FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES, lifting lower and upper eyelids occasionally. Get medical attention immediately.

First Aid - Skin Contact: Wash with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

First Aid - Ingestion: If swallowed, do NOT induce vomiting. Give victim a glass of water. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

SECTION V - FIRE AND EXPLOSION INFORMATION

Flash Point: N.A. - Aqueous solution

Flammable Limits: LEL: N.A. **UEL:** N.A.

SECTION V - FIRE AND EXPLOSION INFORMATION (continued)

Extinguishing Media: None required - Aqueous solution. Alcohol, foam, CO₂, dry chemical, water fog may be used.

Special Fire Fighting Procedures: If storage containers are involved in fire, keep cool with water spray to prevent pressure build-up. As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear.

Unusual Fire and Explosion Hazard: None known. "Empty" containers retain some product residue (liquid and/or water vapor) and can be dangerous when pressurized. Bursting of containers can occur at elevated temperatures. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: Absorb spill with inert material (e.g. dry sand or earth) then place in a chemical waste container. Avoid runoff into storm sewers and ditches which lead to waterways. Follow all government regulations.

SECTION VII - HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Do not get into eyes, on skin or on clothing.

Storage: Keep container closed when not in use. Store in corrosion resistant containers. Store away from incompatible materials. Aqueous solutions of citric acid can, if in contact with reactive metals (iron, zinc, aluminum), over a period of time form hydrogen - an extremely flammable gas. Store under a controlled environment. Avoid excessive heat. Keep from freezing.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace condition warrant a respirator's use.

Skin Protection: Rubber, neoprene or polyvinyl chloride impervious gloves may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Consult your glove manufacturer for compatibilities.

Eye Protection: Wear chemical splash goggles. DO NOT WEAR CONTACT LENSES.

Other Protective Equipment: Wear suitable protective clothing to minimize and/or prevent contact. An eye-wash and safety shower should be present in the immediate area when handling this product.

Hygienic Practices: Wash hands before eating. Remove contaminated clothing and wash before reuse. Use only in well ventilated area. Follow all MSDS/label precautions even after containers are emptied because they may retain product residues. Avoid contact with eyes, skin and clothing.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	>212°F (100°C)	Melting/Freezing Point:	N.D.
Odor:	N.D.	Appearance:	Opaque, white gel/paste
Specific Gravity:	1.1	Solubility in Water:	Complete
Vapor Density:	Heavier than air	Vapor Pressure:	N.D.
Physical State:	Heavy liquid	Odor Threshold:	N.D.
Evaporation Rate:	<1 (Butyl Acetate = 1)	pH @ 100 %:	~2
Viscosity:	N.D.	Coeff. of Water/Oil Dist.:	N.D.

(See Section 16 for abbreviation legend)

SECTION X - STABILITY AND REACTIVITY

Stability: This product is stable under normal storage conditions.

Conditions to Avoid: N.A.

Incompatibility: Strong bases, alkali metals, oxides of sulfur, strong oxidizers, strong reducing agents, caustic materials.

Hazardous Decomposition or Byproducts: Carbon dioxide, carbon monoxide

Hazardous Polymerization: Will not occur under normal conditions.

SECTION XI - TOXICOLOGICAL PROPERTIES

Threshold Limit Value: LD 50 (ORAL-RAT) 11.7 g/kg (as dry material)
LD 50 (SCU-RAT) 5500 mg/kg (as dry material)
LD 50 (IPR-RAT) 883 mg/kg (as dry material)
LD 50 (ORAL-MOUSE) 5040 mg/kg (as dry material)

Carcinogenicity: NTP: N.A. IARC Monographs: N.A. OSHA Regulated: N.A.

SECTION XII - ECOLOGICAL PROPERTIES

Ecological Information: No information.

SECTION XIII - DISPOSAL CONSIDERATIONS

Disposal Method: Follow all federal, state and local regulations.

SECTION XIV - TRANSPORTATION INFORMATION

UN Number: Not listed **UN Proper Shipping Name:** Not Regulated (Citric acid solution)

Marine Pollutant: No

DOT, TDG, IMDG, ICAO/IATA: Not Regulated

SECTION XV - REGULATORY INFORMATION**U.S. Federal Regulations as Follows:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA - SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard

SARA Section 313: This product contains the following substances 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:

No SARA Section 313 components exist in this product.

Toxic Substances Control Act (TSCA): The chemical substances in this product are on the TSCA Section 8 Inventory.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No information is available.

Canada Regulations as Follows:

WHMIS: The Canadian Workplace Hazardous Materials Information System classification for this product is:

None - this is not a controlled product

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

SECTION XVI - OTHER INFORMATION

Date Prepared: 09/11/2003

Date Revised: 12/01/2017

Previous Revision Date: 07/01/2014

Signature of Preparer:



Legend: N.A. - Not Applicable

N.E. - Not Established

N.D. - Not Determined

While the company believes that the data contained herein is factual and the opinions expressed are based on tests and data believed to be reliable, it is the user's responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by this company as to the effects of such use, the results to be obtained, or the safety and toxicity of the product, nor does this company assume any liability arising out of the use, by others, of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or governmental regulations.