

4. FIRST AID MEASURES

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation persists.
Skin contact	Wash off with warm water and soap. Remove and wash contaminated clothing before re-use. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
Ingestion	Rinse mouth. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Carbon dioxide (CO ₂). Dry powder. Water spray. Alcohol-resistant foam.
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.
Hazardous Combustion Products	Thermal decomposition can lead to release of irritating gases and vapors.

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.

NFPA **Health Hazard - 2** **Flammability - 1** **Stability - 0**

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation. Avoid contact with the skin and the eyes. Use personal protective equipment.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.
Other information	See Section 12 for additional information.

7. HANDLING AND STORAGE

Advice on safe handling	Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Wash thoroughly after handling.
Technical measures/Storage conditions	Keep tightly closed in a dry and cool place. Keep at temperatures between 5°C and 25°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Occupational Exposure Controls	
Engineering Measures	Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits.
Personal Protective Equipment	
General Information	These recommendations apply to the product as supplied.
Respiratory protection	Use only with adequate ventilation. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.
Eye/Face Protection	Safety glasses with side-shields. If splashes are likely to occur, wear:. Goggles.
Skin and body protection	Wear suitable protective clothing.
Hand Protection	Impervious gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state liquid	Odor Odorless
ph No information available	Color orange
Flash point: No information available	Autoignition temperature: No information available
Boiling point/boiling range > 100 °C	
Vapor Pressure 23 hPa @ 20 °C	
Vapor density No information available	
Density 1.106 g/cm ³	
Water Solubility Miscible with water	
Melting point/range: No information available	
Specific Gravity No information available	
Bulk Density: No information available	

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Incompatible products	Acids. Bases. Oxidizing agents.
Conditions to Avoid	None known.
Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapors.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity - Product Information

Skin	May cause skin irritation and/or dermatitis.
Eyes	Irritating to eyes.
Inhalation	May cause irritation of respiratory tract.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90,000 mg/kg (Rat)		
Citric acid	3000 mg/kg (Rat)		

Subchronic toxicity No information available

Carcinogenicity There are no known carcinogenic chemicals in this product.

Target Organ Effects Eyes.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects The environmental impact of this product has not been fully investigated.

Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Citric acid		LC50= 1516 mg/L <i>Lepomis macrochirus</i> 96 h	EC50 = 120 mg/L 72 h (<i>Daphnia magna</i>)

Persistence and degradability No information available

Bioaccumulation: - No information available

Mobility - No information available

Chemical Name	log Pow
Citric acid	-1.72

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with local regulations.

Contaminated packaging Do not re-use empty containers. Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>ICAO/IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated

For transportation information, go to: <http://ship.carestreamhealth.com>.

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2B Toxic materials



International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies
NZIoC	Complies

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

16. OTHER INFORMATION

Disclaimer for Label

The data below reflects current legislative requirements whereas the product in your possession may carry a different version of the label depending on the date of manufacture.



Warning!

- Contains:

Hazardous Components

Chemical Name	CAS-No	Weight %
Citric acid	77-92-9	20-25

Irritating to eyes.

Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Wash thoroughly after handling.

Additional information is given in the Material Safety Data Sheet.

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text