Clore Wildfire Defense

Safety Data Sheet

According to the Hazardous Products Regulations (HPR) WHMIS 2022
Issue date: 01-31-2025 Revision date: 06-06-2025 Version: 1.1

SECTION 1 Identification

1.1. GHS Product identifier

Product form	:	Mixture
Product name	:	Clore Wildfire Defense
Product code	:	No data available

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use	:	Fire Suppression and Fire Retardant for Wildfires

1.4. Supplier's details

Supplier
Clore Corporation
154 Montelena Court
Mountain View, CA, 94040
T 425-443-6900

1.5. Emergency phone number

Emergency number	:	425-443-6900

SECTION 2 Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Not classified.

2.2. GHS label elements, including precautionary statements

GHS-CA labelling

No labelling applicable.

2.3. Other hazards which do not result in classification

No additional information available.

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%Weight
Citric acid	Anhydrous citric acid / 2-Hydroxypropane-1,2,3-tricarboxylic acid / CITRIC ACID / 1,2,3-Propanetricarboxylic acid, 2-hydroxy- / 2-Hydroxy-1,2,3-propanetricarboxylic acid / Citric acid, anhydrous	CAS-No.: 77-92-9	0 - <10

Comments : *Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.

First-aid measures after eye contact : 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.

First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5 Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard	:	Products of combustion may include, and are not limited to: oxides of carbon. phosphates. Nitrogen oxides.

5.3. Special protective actions for fire-fighters

Protection during firefighting	:	Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	:	Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Environmental precautions	:	Prevent entry to sewers and public waters.

6.2. Methods and materials for containment and cleaning up

For containment	:	Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.
Methods for cleaning up	:	Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke.
Hygiene measures	:	Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep out of the reach of children. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Keep out of direct sunlight.
Specific end uses	:	Not available.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection:

Wear suitable gloves. Consult glove manufacturer's product information on material suitability and material thickness.

Eye protection:

Safety glasses or goggles are recommended when using product.

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. SDSs cannot provide detailed and complete respiratory protection guidelines. Selection of respiratory protection must be done by a qualified person who has assessed the work environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear liquid.
Colour	:	No data available
Odour	:	Odourless
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20°C	:	No data available
Relative density	:	No data available
Density	:	1.124 g/ml
Solubility	:	Water: > 80 %
Partition coefficient n-octanol/water	:	No data available
Viscosity, kinematic	:	37.811 mm²/s
Viscosity, dynamic	:	44.5 cP
Explosive limits	:	No data available
Particle characteristics	:	No data available

Citric acid (77-92-9)	
Auto-ignition temperature	1010 °C
Vapour pressure	0.00000221 Pa Temp.: 25 °C Remarks on result: 'other:'
Particle characteristics	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

Reactivity	:	No dangerous reactions known under normal conditions of use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reactions known under normal conditions of use.
Conditions to avoid	:	Heat. Direct sunlight.
Incompatible materials	:	None known.
Hazardous decomposition products	:	May include, and are not limited to: oxides of carbon. phosphates. Oxides of nitrogen.
Hardening time:	:	No additional information available

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral)	:	Not classified.
Acute toxicity (dermal)	:	Not classified.
Acute toxicity (inhalation)	:	Not classified.

Clore Wildfire Defense	
LD50 oral rat	> 5000 mg/kg (female albino rats; US EPA OCSPP 870.1100)

Citric acid (77-92-9)	
LD50 oral rat	3 g/kg (Source: NLM_CIP)
LD50 oral	5400 mg/kg bodyweight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:, 95% CL: 4500 - 6400
LD50 dermal rat	> 2000 mg/kg (Source: EU_CLH)
ATE CA (oral)	3000 mg/kg bodyweight

Skin corrosion/irritation : Not classified.

Citric acid (77-92-9)	
pH	2.1 (conc: 0.1 M (solution)

Serious eye damage/irritation : Not classified.

Citric acid (77-92-9)	
pH	2.1 (conc: 0.1 M (solution)

Respiratory or skin sensitization	:	Not classified.
Germ cell mutagenicity	:	Not classified.
Carcinogenicity	:	Not classified.
Reproductive toxicity	:	Not classified.
STOT-single exposure	:	Not classified.

Citric acid (77-92-9)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified.

Citric acid (77-92-9)	
LOAEL (oral, rat, 90 days)	8000 mg/kg bodyweight Animal: rat
NOAEL (oral, rat, 90 days)	4000 mg/kg bodyweight Animal: rat

Aspiration hazard : Not classified.

Clore Wildfire Defense	
Viscosity, dynamic	44.5 cP

Symptoms/effects after inhalation	:	May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	:	May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	:	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion	:	May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Other information	:	Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12 Ecological information

12.1. Toxicity

Ecology - general	:	May cause long-term adverse effects in the aquatic environment.
Hazardous to the aquatic environment, short–term (acute)	:	Not classified.
Hazardous to the aquatic environment, long–term (chronic)	:	Not classified.

Clore Wildfire Defense	
LC50 - Fish [1]	4450 mg/l Rainbow Trout

Citric acid (77-92-9)	
LC50 - Fish [1]	1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus Source: OECD_SIDS)
EC50 - Other aquatic organisms [1]	> 50 mg/l Test organisms (species): other aquatic crustacea:

12.2. Persistence and degradability

Clore Wildfire Defense	
Persistence and degradability	Not established.

Citric acid (77-92-9)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

Clore Wildfire Defense	
Bioaccumulative potential	Not established.

Citric acid (77-92-9)	
Partition coefficient n-octanol/water	-1.72 (at 20 °C)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone	:	Not classified.
Other information	:	No other effects known.
Fluorinated greenhouse gases	:	No

SECTION 13 Disposal considerations

Product/Packaging disposal recommendations	:	Dispose in a safe manner in accordance with local/national regulations. Do not discharge into drains or the environment.

SECTION 14 Transport information

In accordance with TDG / IMDG / IATA

14.1. UN Number

UN-No. (TDG)	:	Not applicable
UN-No. (IMDG)	:	Not applicable
UN-No. (IATA)	:	Not applicable

14.2. UN Proper Shipping Name

Proper Shipping Name (TDG)	:	Not regulated
Proper Shipping Name (IMDG)	:	Not regulated
Proper Shipping Name (IATA)	:	Not regulated

14.3. Transport hazard class(es)

TDG

Transport hazard class(es) (TDG) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group, if applicable

Packing group (TDG)	:	Not applicable
Packing group (IMDG)	:	Not applicable
Packing group (IATA)	:	Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

TDG

Not applicable

IMDG

Not applicable

IATA

Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78[9] and the IBC Code[10]

Not applicable

SECTION 15 Regulatory information

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

SECTION 16 Other Information

Issue date	:	01-31-2025
Revision date	:	01-31-2025

Other information	:	None.
Prepared by	:	Nexreg Compliance Inc. www.Nexreg.com

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