

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : (CAL) Citric 50%

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Cleaner

1.3. Supplier

Manufacturer

Five Star Chemicals & Supply Inc
 6870 W 52nd Ave. Suite 205
 Arvada, CO 80002
 T (303)287-0186

1.4. Emergency telephone number

Emergency number : 800-535-5053 (Infotrac)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Eye Irrit. 2A

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Warning
 Hazard statements (GHS US) : Causes serious eye irritation
 Precautionary statements (GHS US) : Wash hands thoroughly after handling.
 Wear protective gloves, eye protection.
 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.

2.3. Other hazards which do not result in classification

No additional information available

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	%
Citric acid	(CAS-No.) 77-92-9	30 – 60

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

SECTION 4: First-aid measures

4.1. Description of 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.

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

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 and 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	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

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 (and unsuitable) extinguishing media

Suitable extinguishing media	: Carbon dioxide (CO ₂), dry chemical powder, foam. Water spray.
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.
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5.3. Special protective equipment and precautions for fire-fighters

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

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). Neutralize with lime milk or soda and flush with plenty of water.
Methods for cleaning up	: Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

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. Do not breathe dust/fume/gas/mist/vapors/ 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. Store in original container.
Storage temperature	: > 41 °F

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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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/Personal protective equipment

Hand protection:

Wear suitable gloves

Eye protection:

Wear eye protection

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.

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. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Clear to opaque
Odor	: None
Odor threshold	: No data available
pH	: Alkali Reserve: 14.05
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 216 – 226 °F (102 - 108 °C)
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.24
Density	: 1.23 – 1.25 g/cm ³ (68 °F / 20 °C)
Solubility	: completely miscible.
Partition coefficient n-octanol/water	: -1.8 to -0.2
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 7 – 10 mPa·s (77 °F / 25 °C)
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

(CAL) Citric 50%	
LD50 oral rat	11700 mg/kg Method: OECD Test Guideline 401
LD50 dermal rat	> 2000 mg/kg
Citric acid (77-92-9)	
LD50 oral rat	11700 mg/kg
LD50 dermal rat	> 2000 mg/kg
ATE US (oral)	11700 mg/kg body weight

Skin corrosion/irritation	: Not classified pH: Alkali Reserve: 14.05
Serious eye damage/irritation	: Causes serious eye irritation. pH: Alkali Reserve: 14.05
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
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	: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
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.
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Citric acid (77-92-9)	
LC50 - Fish [1]	1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

12.2. Persistence and degradability

(CAL) Citric 50%	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

(CAL) Citric 50%	
Partition coefficient n-octanol/water (Log Kow)	-1.8 to -0.2
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

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal 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 applicable

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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Other information : None.

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