

# DESCALING SOLUTION

## Material & Safety Data Sheet

### SECTION 1: IDENTIFICATION

Substance Identification:

Name - Descaling Solution  
Form - Mixture  
Solute/ Solvent - Citric Acid/ Water  
Recommended Use - General cleaning purposes

Supplier Contact Information:

HaleFresh  
PO BOX 8162,  
Rochester MN 55934  
[info@halefresh.com](mailto:info@halefresh.com)  
507.320.4007

EMERGENCY Telephone:

**EMERGENCY Response - CALL 911**  
**Over Exposure - CHEMTREC 1-800-222-1222 (24 HR Emergency)**

### SECTION 2: HAZARD IDENTIFICATION

Hazard Pictograms:



GHS07



Health	1
Fire	0
Reactivity	0
Personal Protection	E

Signal Word -

Warning

Hazard Statements -

H315 Causes serious eye irritation  
H319 Causes skin irritation

Precautions -

P337+P313 If eye irritation persists seek medical attention.  
P337+P313 If skin irritation persists seek medical attention.  
P362 Take off contaminated clothing and wash before reuse.  
P280 Wear Protective goggles and gloves.  
P302+P352 *IF ON SKIN* Wash exposed skin thoroughly after handling.  
P305+P351+P338 *IF IN EYES*, rinse with water for several minutes. Remove contact lenses if easy to do. Continue rinsing.

### SECTION 3: COMPOSITION INFORMATION/ INGREDIENTS

Characterization:

Type - Mixture

Name	Product Identifier	%	GHS-US Classification
Water	(CAS No) 7732-18-5	>50%	Not classified
Citric Acid	(CAS No) 77-92-9	<50%	Eye Irritant 2A, H319

## DESCALING SOLUTION

### Material & Safety Data Sheet

#### SECTION 4: FIRST AID MEASURES

**General Information** - Remove affected persons from the area and away from danger.

**After Inhalation** - Move to a well-ventilated area and supply fresh air. Breathe deeply. Seek medical attention as needed.

**After Skin Contact** - Immediately wash affected area with soap and water. Monitor for irritation and seek medical attention as needed.

**After Eye Contact** - Hold eyes open and rinse for at least 15 minutes. Remove contacts if applicable and continue rinsing. If irritation persists seek medical attention.

**After Swallowing** - Rinse out mouth and drink plenty of water. Consult physician before inducing vomiting.

**Most Important Symptom** - Causes serious eye irritation!

#### SECTION 5: FIRE & EXPLOSION DATA

**Flammability** - May be combustible at a high temperature

**Auto- Ignition Temp** - 1010 °C (1850 °F)

**Flash Points** - Not Available

**Flammable Limit** - LOWER: 1.28 kg/m<sup>3</sup> (Dust) UPPER: 2.29 kg/m<sup>3</sup>

**Products of Combustion** - The products are carbon dioxides (CO & CO<sub>2</sub>)

**Fire Extinguishing Media** - SMALL FIRE: Use DRY Chemical Powder, LARGE FIRE: Use Water spray, fog or foam. Do not use water jet.

## DESCALING SOLUTION

### Material & Safety Data Sheet

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions - Ensure adequate ventilation and wear protective clothing.

Environmental Precautions - Dilute with plenty of water

Small Spill - Using the appropriate protective equipment and tools, clean up the spill and place in a disposal container according to local guidelines. Finish by cleaning the affected area with water.

Large Spill - Stop leak if without risk. Do not touch spilled material. Use water spray to reduce vapors. Prevent continued release by creating a dike or using inert solids such as sand or soil. Eliminate ignition sources. Call for assistance on disposal. Finish by cleaning the affected area with clean water.

#### SECTION 7: HANDLING & STORAGE

Precautions for Safe Handling - Ensure good ventilation while using. Wash hands and other exposed areas with mild soap and water after use. Do not eat, drink, or smoke after before washing hands or other exposed areas.

Storage Conditions - Store away from heat, sources of ignition and direct sunlight. Store away from oxidizing agents and strong bases. Store out of reach of children. Store sealed product in a cool dry place and in the original receptacle.

#### SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTIVE EQUIPMENT

Engineering Controls - Emergency eye wash stations should be available in the immediate vicinity of any potential exposure.

Personal Protection - Safety glasses. Gloves. Keep skin covered.



A dust respirator may be used when in an area of poor ventilation, a ventilation system is not in place or if discomfort is experienced.

## DESCALING SOLUTION

### Material & Safety Data Sheet

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State -	Liquid
Appearance -	Clear colorless liquid
Color -	Colorless
Odor -	Slight
pH -	~2.5
Melting Point -	No data available
Freezing Point -	No data available
Boiling Point -	No data available
Flash Point -	No data available
Flammability (solid gas) -	Non- Flammable
Vapor Pressure -	No data available
Solubility -	Soluble in Water
Oxidizing Properties -	None

#### SECTION 10: STABILITY AND REACTIVITY

Stability -	The product is stable.
Conditions of Instability -	Excess heat, incompatible materials.
Substances of Incompatibility -	Reactive with oxidizing agents, reducing agents, metals, alkalis, strong bases, bicarbonates, acetates.
Corrosivity -	Corrosive in the presence of aluminum, zinc, copper and their alloys. NOT corrosive in the presence of glass.
Special remarks on Reactivity -	Upon decomposition, product will produce carbon dioxide and carbon monoxide.

# DESCALING SOLUTION

## Material & Safety Data Sheet

### SECTION 11: TOXICOLOGICAL INFORMATION

Likely routes of exposure - Skin and eye contact

Acute toxicity - Not classified

Citric Acid, Anhydrous (77-92-9)	
LD50 oral rat	5400 mg/kg
ATE US (oral)	5400.000 mg/kg body weight
Water (7732-18-5)	
LD50 oral rat	≥90000
ATE US (oral)	90000.000 mg/kg body weight

Skin corrosion/ irritation - Not classified

Serious eye damage/ irritation - Causes serious eye irritation

Respiratory or skin sensitization - Not classified

Mutagenic Properties - Not classified

Carcinogenic Properties - Not classified

Aspiration Hazard - Not classified

Potential Adverse Human Health Effects & Symptoms - Based on available data, the classification criteria are not met.

### SECTION 12: ECOLOGICAL INFORMATION

Aquatic Toxicity - Not available

Persistence & Degradability - Not available

Bio Cumulative Potential - Not available

Mobility in Soil - Not available

General Notes - Generally, not hazardous for water

Other Information - Avoid release into the environment

### SECTION 13: DISPOSAL CONSIDERATIONS

Recommended Disposal - Always consult local/national regulations before disposal. Smaller quantities can be disposed of with household waste.

Ecology - Avoid release into the environment

## DESCALING SOLUTION

### Material & Safety Data Sheet

#### SECTION 14: TRANSPORT INFORMATION

DOT Classification - Not a DOT controlled material (US)  
Identification - Not applicable  
Special Provisions for Transport - Not applicable

#### SECTION 15: REGULATORY INFORMATION

Federal and State Regulations - TSCA 8(b) inventory: Citric acid  
DSDL (ECC) - R36/37/38- Irritating to eyes, respiratory system and skin. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/39- Wear suitable gloves and eye/face protection.  
HMIS (USA) - Health Hazard: 2; Fire Hazard: 1 Reactivity: 0  
Additional Regulations - No additional information available

#### SECTION 16: OTHER INFORMATION

References - Not available  
Created - 04/06/2018  
Last Updated - 04/06/2018

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Halefresh be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Halefresh has been advised of the possibility of such damages