SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture
Product Name: GenClean™ 704
Intended Use of the Product
Membrane cleaning. Mineral and organic scale removal.

Name, Address, and Telephone of the Responsible Party

Manufacturer
CHEMTRADE LOGISTICS INC.
155 Gordon Baker Road
Suite 300
Toronto, Ontario M2H 3N5
For SDS Info: (416) 496-5856
www.chemtradelogistics.com

Emergency Telephone Number

Emergency number : Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300
Chemtrade Emergency Contact: (866) 416-4404
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)
Skin Corr. 1A H314
Eye Dam. 1 H318

Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US):

Signal Word (GHS-US) : Danger
Hazard Statements (GHS-US) : H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage

Precautionary Statements (GHS-US) : P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms and exposed areas thoroughly after handling.
P280 - Wear eye protection, protective clothing, protective gloves.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a doctor/POISON CENTER.
P321 - Specific treatment (see Section 4).
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulations.
Other Hazards

Other Hazards Not Contributing to the Classification: Contains substances that are combustible dusts. If dried and allowed to accumulate may form combustible dust concentrations in air that could ignite and cause an explosion. Take appropriate precautions.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Name</th>
<th>Product Identifier</th>
<th>% (w/w)</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Citric acid</td>
<td>(CAS No) 77-92-9</td>
<td>30 - 60</td>
<td>Comb. Dust Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td></td>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>30 - 60</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16
Multiple WHMIS ranges have been utilized to account for varying concentration.

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Rinse immediately with plenty of water for at least 60 minutes. Obtain medical attention. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes severe skin burns and eye damage. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

Skin Contact: Causes serious burns.

Eye Contact: Causes serious eye damage.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

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

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive. Contains substances that are combustible dusts. If dried and allowed to accumulate may form combustible dust concentrations in air that could ignite and cause an explosion. Take appropriate precautions.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂).
GenClean™ 704
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Reference to Other Sections
Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing vapor, mist, or spray.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).


For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections


SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.


Specific End Use(s)

Membrane cleaning. Mineral and organic scale removal.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Acid-resistant clothing.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, use NIOSH-approved respiratory protection.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State: Liquid

Appearance: Clear, colorless to yellow

Odor: Slight sugar odor
GenClean™ 704

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>0.7 - 0.9</td>
</tr>
<tr>
<td>Relative Evaporation Rate (butylacetate=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>0 °C (32 °F)</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Vapor Density at 20 °C</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.22 - 1.24</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosion Data – Sensitivity to Mechanical Impact</td>
<td>Not expected to present an explosion hazard due to mechanical impact.</td>
</tr>
<tr>
<td>Explosion Data – Sensitivity to Static Discharge</td>
<td>Not expected to present an explosion hazard due to static discharge.</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

Hazardous Decomposition Products: Carbon oxides (CO, CO₂).

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Information on Toxicological Effects - Product**

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Causes severe skin burns and eye damage. (pH: 0.7 - 0.9)

Serious Eye Damage/Irritation: Causes serious eye damage. (pH: 0.7 - 0.9)

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

Symptoms/Injuries After Skin Contact: Causes serious burns.

Symptoms/Injuries After Eye Contact: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

**Information on Toxicological Effects - Ingredient(s)**

LD50 and LC50 Data:
# GenClean™ 704

Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Compound</th>
<th>LD50 Oral Rat</th>
<th>LD50 Dermal Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid (77-92-9)</td>
<td>5400 mg/kg</td>
<td>&gt; 2000 mg/kg</td>
</tr>
</tbody>
</table>

## SECTION 12: ECOLOGICAL INFORMATION

### Toxicity

<table>
<thead>
<tr>
<th>Compound</th>
<th>LC50 Fish 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid (77-92-9)</td>
<td>1516 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
</tr>
</tbody>
</table>

### Persistence and Degradability

<table>
<thead>
<tr>
<th>Compound</th>
<th>Persistence and Degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid (77-92-9)</td>
<td>Readily biodegradable in water.</td>
</tr>
</tbody>
</table>

### Bioaccumulative Potential

<table>
<thead>
<tr>
<th>Compound</th>
<th>Mobility in Soil</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric acid (77-92-9)</td>
<td>Not available</td>
<td>-1.72 (at 20 °C)</td>
</tr>
</tbody>
</table>

### Other Adverse Effects

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

### Waste Disposal Recommendations

Dispose of waste material in accordance with all local, regional, national, and international regulations.

### Ecology – Waste Materials

Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 In Accordance with DOT

<table>
<thead>
<tr>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Identification Number</th>
<th>Label Codes</th>
<th>Packing Group</th>
<th>ERG Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CITRIC ACID SOLUTION)</td>
<td>8</td>
<td>UN3265</td>
<td>8</td>
<td>III</td>
<td>153</td>
</tr>
</tbody>
</table>

### 14.2 In Accordance with IMDG

<table>
<thead>
<tr>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Identification Number</th>
<th>Packing Group</th>
<th>Label Codes</th>
<th>EmS-No. (Fire)</th>
<th>EmS-No. (Spillage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CITRIC ACID SOLUTION)</td>
<td>8</td>
<td>UN3265</td>
<td>III</td>
<td>8</td>
<td>F-A</td>
<td>S-B</td>
</tr>
</tbody>
</table>

### 14.3 In Accordance with IATA

<table>
<thead>
<tr>
<th>Proper Shipping Name</th>
<th>Packing Group</th>
<th>Identification Number</th>
<th>Hazard Class</th>
<th>Label Codes</th>
<th>ERG Code (IATA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CITRIC ACID SOLUTION)</td>
<td>III</td>
<td>UN3265</td>
<td>8</td>
<td>8</td>
<td>8L</td>
</tr>
</tbody>
</table>

### 14.4 In Accordance with TDG

<table>
<thead>
<tr>
<th>Proper Shipping Name</th>
<th>Packing Group</th>
<th>Hazard Class</th>
<th>Identification Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (CITRIC ACID SOLUTION)</td>
<td>III</td>
<td>8</td>
<td>UN3265</td>
</tr>
</tbody>
</table>

Date of Issue: 05/01/15

EN (English US) SDS#: CHE-5028S
SECTION 15: REGULATORY INFORMATION

US Federal Regulations

GenClean™ 704
SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard

Citric acid (77-92-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Neither this product nor any of its components appear on any U.S. State lists.

Canadian Regulations

GenClean™ 704
WHMIS Classification | Class E - Corrosive Material

Citric acid (77-92-9)
Listed on the Canadian DSL (Domestic Substances List)
Listed on the Canadian IDL (Ingredient Disclosure List)
IDL Concentration 1 %
WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)
WHMIS Classification | Uncontrolled product according to WHMIS classification criteria

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

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 05/01/15
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Combustible Dust</th>
<th>May form combustible dust concentrations in air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation Category 1A</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>

Party Responsible for the Preparation of This Document
CHEMTRADE LOGISTICS, INC.
For SDS Info: (416) 496-5856
Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA’S “Right to Know” (29 CFR 1910.1200) and Canada’s WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.