Safety Data Sheet
Citric Acid 20%

Section I – Product and Company Identification

Synonym: 2-Hydroxy-1,2,3-Propanetricarboxylic Acid
CAS No.: 77-92-9
Molecular Weight: 192.13g/mol
Chemical Formula: C₆H₈O₇
Product Code: CA20-4

Company Identification:
Chief Medical Supplies Ltd.
411 – 19 Street, S. E.
Calgary, AB., Canada.
T2E 6J7
1.866.620.6034

For information, call: 1-403-207-6034
Emergency Number: 1-403-207-6034

Section II – Hazards Identification

Appearance: Clear colorless liquid
Physical State: Liquid
Odor: Odorless

Hazards of Product: Causes eye and skin irritation. May cause respiratory tract irritation.

Potential Health Hazards
Eye: Causes severe eye irritation.
Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Some references state that citric acid has allergenic properties but, no animal or human studies were found to support this claim. It does not seem likely that citric acid is a sensitizer since it is found in the body as an essential component of the citric acid cycle which releases energy for physiological functions. Citric acid is widely distributed in plants and in animal tissues and fluids.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Excessive intake of citric acid may cause erosion of the teeth.

Inhalation: May cause respiratory tract irritation. Because its vapor pressure is negligible, it exists in the air only as a mist or spray.

Section III – Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>Chemical Formula</th>
<th>CAS No.</th>
<th>% by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid</td>
<td>C₆H₈O₇</td>
<td>64-19-7</td>
<td>20%</td>
</tr>
<tr>
<td>Water</td>
<td>H₂O</td>
<td>7732-18-5</td>
<td>80%</td>
</tr>
</tbody>
</table>
Section IV – First Aid Measures

**Skin Contact:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Section V – Fire Fighting Measures

- **Conditions of flammability:** Not available
- **Flash point and method of determination:** Not available
- **Upper flammable limit:** Not available
- **Lower flammable limit:** Not available
- **Auto-ignition temperature:** Not available
- **Hazardous combustion products:** Not applicable
- **Explosion data - sensitivity to mechanical impact:** Not available
- **Explosion data - sensitivity to static discharge:** Not available

**Fire Fighting Media and Instructions:** Use DRY chemicals, CO2, alcohol foam or water spray.

**Special Remarks on Fire Hazards:** Not available

**Special Remarks on Explosion Hazards:** Not available

Section VI – Accidental Release Measures

**Spill:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Spill may be carefully neutralized with lime (calcium oxide, CaO).

Section VII – Handling and Storage

**Handling Procedures:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Avoid breathing spray or mist.

**Storage Requirements:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.
Section VIII – Exposure Controls/Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Personal Protection**

**Eyeware:** Chemical splash goggles
**Gloves:** Gloves
**Clothing:** Synthetic apron
**Respirator:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Exposure Limits:** OSHA Permissible Exposure Limit (PEL): 25 ppm (TWA); ACGIH Threshold Limit Value (TLV): 10 ppm (TWA); 10 ppm (STEL).

Section IX – Physical and Chemical Properties

**Physical state:** Liquid
**Odour and appearance:** Odorless
**Odour threshold:** Not available
**Specific gravity:** Not available
**Vapour pressure:** Not available
**Vapour density:** Not available
**Evaporation rate:** Not available
**Boiling point:** Not available
**Freezing point:** Not available
**pH (1% soln/water):** Not available
**Coefficient of water/oil distribution:** Not Available
**Taste:** Not available
**Critical Temperature:** Not available
**Dispersion Properties:** Not available
**Solubility:** Soluble in water

Section X – Stability and Reactivity

**Stability:** Stable

**Conditions to avoid:** Incompatible materials, excess heat.

**Incompatible materials:** Oxidizing agents, potassium tartrate, alkalis, alkali carbonates, acetates, sulfides (inorganic, e.g. ferric sulfide, lead sulfide, sodium sulfide), bicarbonates, metal nitrates, strong oxidizing agents, metals, strong reducing agents, strong bases.

**Conditions of reactivity:** Not available

**Hazardous decomposition products:** Carbon monoxide. Carbon dioxide.

**Special Remarks on Corrosivity:** Not available

**Polymerization:** Will not occur
Section XI – Toxicological Information

Route of entry: Not available
Effects of Acute exposure: Not available
Other Toxic Effects on Humans: Not available
Irritancy of product: Not available
Sensitization to product: Not available
Carcinogenicity: Not available
Reproductive toxicity: Not available
Teratogenicity: Not available
Mutagenicity: Not available
Toxicologically synergistic products: Not available
Toxicity to Animals: Not available
Special Remarks on other Toxic Effects on Humans: Not available

Section XII – Ecological Information

Ecotoxicity: Not available
BOD5 and COD: Not available
Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation: Not available
Special Remarks on the Products of Biodegradation: Not available.

Section XIII – Disposal Considerations

Waste disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section XIV – Transport Information

Special shipping information: Not regulated
Transport of Dangerous Goods (TDG): Not regulated
Department of Transportation (DOT): Not a DOT controlled material (United States).
International Maritime Dangerous Goods (IMO): None
International Civil Aviation Organization (ICAO): None

WHIMIS classification: CLASS E: Corrosive liquid (Canada)
OSHA: Not available
SERA: Not available
TSCA: TSCA 8(b) inventory: Citric acid
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 Chief Medical Supplies 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 Chief Medical Supplies has been advised of the possibility of such damages.

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