1. Identification and Company Information

Product name
Citric acid
Use of the substance
Low pH adjuster
Company identification
Supplier

Sci-Tech Engineered Chemicals

Contact information

Street address	#340-53016 Hwy 60
City	Acheson
Province	Alberta
Postal Code	T7X 5A7
Telephone	780-960-1200
Fax	780-960-1201
Web	www.scitechinc.ca

Emergency Telephone
CANUTEC
(613) 996-6666

2. Hazard Identification

HAZARD OVERVIEW: White solid

HEALTH HAZARD:
EYES: Causes eye irritation. Exposed individuals may experience eye tearing, redness and discomfort

SKIN: Causes mild skin irritation.
INHALATION: Causes respiratory tract irritation.
INGESTION: None known.

3. Composition, Information of Ingredients

Hazardous Components

Chemical name	CAS #	Concentration	LD(50) of Ingredient
Citric acid	77-92-9	100 %	Rat : 3g/kg (oral)

4. First Aid Measures

Inhalation: Move to fresh air. Get medical attention if symptoms persist.
Skin Contact: Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye Contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Ingestion: No adverse effects do to ingestion.

5. Fire Fighting Measures

Flash Point: none
Autoignition temperature: none
Sensitivity to static discharge: Not available
Sensitivity to mechanical impact: Not available
Extinguishing Media: Use alcohol resistant foam, Co2 or dry chemical. Keep containers cool with water spray.
Special fire fighting procedures: Reacts with metals to generate flammable hydrogen gas. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure build up. Wear SCBA and protective clothing to prevent skin and eye contact in fire situations.
Hazardous decomposition products: Thermal decomposition may yield toxic hydrogen chloride fumes. Thermal oxidative decomposition produces toxic chlorine fumes and explosive hydrogen gas.

6. Accidental Release Measures

Leak and spill procedure: Wear proper PPE. Prevent entry into sewers and waterways. Dyke if necessary. Isolate spill and stop leak where safe. Restrict access to unprotected personnel. Ventilate area. Do not touch or walk through spilled material. Neutralize with lime slurry, limestone or soda ash. Absorb with an inert dry material and place in an appropriate waste disposal container. Flush area with water to remove trace residue.

7. Handling and Storage

Use appropriate personal protection equipment. Avoid eye, skin and clothing contact. Do not breathe mist. Avoid repeated or prolonged contact. Use only in a well ventilated area.
Store away from any product involved in food processing. If the generation of airborne materials cannot be avoided, exhaust ventilation and/or personal protective equipment as described in Section 8 should be used. Store in a dry, well-ventilated area away from incompatible materials. Protect containers from damage. When diluting, add this product to water in small amounts to avoid spattering.

8. Exposure Controls, Personal Protection

Engineering controls: Avoid the generation of airborne mists where possible. Use local ventilation to keep levels below established threshold values.
Respiratory protection: Wear respiratory protection if misting in an enclosed area.
Eye protection: Use chemical goggles or full face shield.
Skin protection: Use impervious (rubber, nitrile) gloves skin contact.
Other protective clothing or equipment: Eye wash, safety shower.
Work hygienic practices: The usual precaution for the handling of chemicals must be observed.

9. Physical and Chemical Properties

Appearance:	Colourless Liquid
Specific gravity (Water = 1)	1.18 - 1.04 +/- 0.2
Reactivity in water:	Exothermic
Boiling point:	108C (20% HCl)
Odour:	Sharp, pungent
pH:	0.1-1.0

10. Stability and Reactivity

Stability: Stable under normal conditions.
Incompatible materials: Large amounts of heat can be generated when acid is mixed with water or organic solvents. Reacts violently with bases to produce heat. Reacts with reducing agents to produce heat, fire and flammable hydrogen gas. Reacts with oxidizers to produce heat and toxic corrosive chloride gases. Contact with explosives may cause detonation. Reacts with cyanides to produce toxic cyanide gas and sulphides to product toxic hydrogen sulphide gas.
Hazardous polymerization: Will not occur. Reaction with some incompatible materials (aldehydes expoxides) can cause polymerization.

11. Toxicological Information

Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product. Repeated and prolonged exposure to low concentrations of mis or vapour and cause discolouration and damage to tooth enamel, bleeding of the nose and gums, chronic bronchitis and gastritis. Repeated exposure to low concentrations of liquid can cause dermatitis.

12. ECOLOGICAL INFORMATION

Environmental fate: Hydrochloric acid can be acutely toxic to aquatic life through reduction of aqueous pH to toxic levels. Typically, most aquatic species are intolerant of pH levels of less than 5.5 for any extended length of time. Lowered pH may also cause liberation of toxic metals. Does not accumulate in the body. dissociated in water. May be neutralized by naturally occurring buffering agents such as carbonate if present.

13. Disposal Considerations

Product should be disposed of in accordance to provincial or state and local government requirements prior to disposal. If the product was supplied in a single use container, care should be taken to dispose of the container in a responsible manner in accordance to local regulations.

14. Transportation Information

Canadian TDG: Hydrochloric acid, Class 8, UN 1789 PG II

15. Regulatory Information

Canadian WHMIS: D.1.a, , E

US Federal Regulations

The components of this product are either on the TSCA Inventory or exempt from the inventory

16. Other Information

PREPARED BY:
SCI-TECH Department of Research and Development

PHONE NUMBER:
(780) 960-1200