

SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: TRANSENE COMPANY, INC.
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EMERGENCY NO. 1-800-424-9300 CHEMTREC

MATERIAL NAME: **COPPER ETCHANT 49-1**

REVISED: May 2019

CHEMICAL FAMILY: Citric Acid Solution

Product Number: 060-49-1

SECTION 2. HEALTH HAZARD INFORMATION

Hazard Statements

H303 Acute toxicity Oral : Category 5

H333 Acute toxicity Inhalation : Category 5

H316 Skin corrosion / Skin irritation : Category 3

H319 Serious eye damage / Eye irritation : Category 2A

Pictograms or Hazard symbols



Warning: Causes eye irritation.

Warning: Causes mild skin irritation. May be harmful if swallowed, inhaled, or in contact with skin.

Precautionary Statements

P264 Wash thoroughly after handling.

P280 Wear protective gloves, clothing, and eye and face protection.

P312 Call a physician if you feel unwell.

P304 + P312 If inhaled, call a physician if you feel unwell.

P305 + P351 + P338 If in eyes, rinse cautiously with water for several minutes

P332 + P313 If skin irritation occurs, get medical advice/attention.

P337 + P313 If eye irritation persists, get medical advice/attention.

SECTION 3.COMPOSITION/INFORMATION ON INGREDIENTS

Material		Wt %	Toxicity
Citric Acid	CAS# 5949-29-1	< 2	
Hydrogen Peroxide	CAS# 7722-84-1	< 1	1 ppm
Ammonium Hydroxide	CAS# 1336-21-6	< 1	50 ppm
Water	CAS# 7732-18-5	> 96	

SECTION 4. FIRST AID MEASURES

EFFECTS OF OVEREXPOSURE

FIRST AID:

Overexposure to mist can cause tissue damage, especially to eyes and lungs.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point and Method non-flammable	Autoignition Temp. NA	Flammability Limits In Air	<u>LOWE</u> <u>R</u> NA	<u>UPPER</u> NA
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Extinguishing media: Water spray or fog, carbon dioxide and dry chemical.

Special fire fighting procedures: None

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILLS, LEAKS: Ventilate area of leak or spill. Dike and cover the contaminated areas with absorbent, non-combustible material such as earth, sand, or vermiculite.

SECTION 7. HANDLING AND STORAGE

Wash thoroughly after handling. Remove contaminated clothing and wash before re-use. Do not breathe mist or vapor. Do not expose eyes, skin, or clothing. Keep container closed tightly. Use with adequate ventilation or respiratory protection. Do not store near combustibles or in direct sunlight. Store in a cool, dry, well-ventilated area away from incompatible substances. Separate from strong acids.

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Respiratory protection: None required.

Ventilation: Where adequate ventilation is not available, use NIOSH approved vapor respirator with dust, fume and mist filters. Local ventilation through fume hoods or laminar flow stations is also preferred. Keep fumes away from strong bases.

Protective gloves: Skin contact should be minimized through use of rubber gloves.

Other protective equipment: Steel tipped shoes/eye wash station/chemical safety chemical retardant clothing.

Eye protection: Safety goggles / face shield

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form :	Liquid
Appearance :	Colorless
Odor :	Mild ammonia
pH :	5.9-6.5
Melting point:	0 °C
Boiling point/Boiling range :	100 °C (water)
Flash point :	Non-flammable.
Ignition point :	Will not ignite.
Danger of explosion:	Product is not explosive
Vapor density (Air = 1) :	Not available
Volatiles, %:	> 80

Vapor pressure at 15° C, mm Hg:

Not available

Specific gravity :

1.01 g/cc

Solubility in / Miscibility:

Completely miscible in water

Evap. Rate (Water = 1):

> 1

SECTION 10. STABILITY AND REACTIVITY

Stability Stable X Conditions to avoid: Excess heat , light, confined spaces
Unstable

Incompatible with:

Strong acids; oxidizers

Hazardous decomposition products: Carbon and carbon oxides; ammonia

Hazardous May occur Conditions to avoid: Excess heat, damp.
polymerization: Will not occur X

SECTION 11. TOXICOLOGICAL INFORMATION

ACUTE, Citric Acid:

LD₅₀ (oral, rat): 6,730 mg/kg

LD₅₀ (eye, rabbit): 750 mg/24 hr

SECTION 12. ECOLOGICAL INFORMATION

Bioaccumulation : There is no evidence of bioaccumulation.

Ecotoxicity : Biologic effects:

No data for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose of in accordance with all federal state and local regulations. Send waste to an approved waste disposal facility.

SECTION 14. TRANSPORTATION INFORMATION

Non-hazardous/non-regulated.

SECTION 15. REGULATORY

Symbol: C, Corrosive

R-Phrase:

R21/22: Harmful in contact with skin and if swallowed.

S-Phrases:

S17: Keep away from combustible material.

SECTION 16. OTHER INFORMATION

NFPA Codes:

Health: 1

Flammability: 0

Reactivity: 0

All ingredients of this product are listed on the US TSCA inventory under their parent anhydrous compounds.

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