

# MATERIAL SAFETY DATA SHEET

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

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

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

REVISED: December 2009

CHEMICAL FAMILY: Citric Acid Solution

## SECTION 2. HEALTH HAZARD INFORMATION

### GHS Classifications

Oxidizing liquids : Not classified  
Corrosive to Metals: Not classified  
Acute toxicity Oral : Category 5  
Acute Toxicity Dermal: Not classified  
Acute toxicity Inhalation : Category 5  
Skin corrosion / Skin irritation : Category 3  
Serious eye damage / Eye irritation : Category 2A  
Respiratory or skin sensitization : Not classified  
Special target organ systemic toxicity single exposure: Not classified  
Special target organ systemic toxicity repeated exposure : Not classified  
Acute aquatic environmental hazards : Not classified  
Chronic aquatic environmental hazards: Not classified

### 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 Statement Prevention

Use only in a well-ventilated area. Do not eat, drink or smoke when using this product. Do not breathe fume/gas/mist/vapors/spray.

Wear protective gloves/protective clothing /eye protection/face protection.

Wash hands thoroughly after handling.

Avoid release to the environment

## SECTION 3.COMPOSITION/INFORMATION ON INGREDIENTS

Material		Wt %	Toxicity
Citric Acid	CAS# 5949-29-1	< 2	
REV 2	Copper Etchant 49-1 GHS Version		

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	Autoignition Temp.	Flammability Limits In Air	<u>LOWER</u>	<u>UPPER</u>
non-flammable	NA		NA	NA

**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**

<b>Form :</b>	Liquid
<b>Appearance :</b>	Colorless
<b>Odor :</b>	Mild ammonia
<b>pH :</b>	5.9-6.5
<b>Melting point:</b>	0 °C
<b>Boiling point/Boiling range :</b>	100 °C (water)
<b>Flash point :</b>	Non-flammable.
<b>Ignition point :</b>	Will not ignite.



## **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.