

SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: TRANSENE COMPANY, INC.
ADDRESS: DANVERS INDUSTRIAL PARK
10 ELECTRONICS AVENUE DANVERS, MA 01923,
TEL: (978) 777-7860 FAX: (978)-739-5640
WWW.TRANSENE.COM
EMERGENCY NO. 1-800-424-9300 CHEMTREC

MATERIAL NAME: **COPPER ETCHANT APS-100**
REVISED: May 2019

General Use: Etchant for copper and copper films.
Product Number:060-060APS100

SECTION 2. HEALTH HAZARD INFORMATION

GHS Classifications

H272: Oxidizing liquids : Category 2

H315: Skin corrosion / Skin irritation : Category 2

H319: Serious eye damage / Eye irritation : Category 2A

Pictograms or Hazard symbols



Danger: May intensify fire. Oxidizer.

Warning: Harmful if swallowed, in contact with skin, or inhaled. Causes skin irritation and serious eye irritation.

Precautionary Statements

P210 Keep away from heat, flames, and hot surfaces. No smoking.

P220 Store away from combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P264 Wash thoroughly after handling.

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

P302 + P352 If on skin, wash with plenty of water. Remove contact lenses if present and easy to do so. Continue rinsing.

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.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P370 + P378 In case of fire use water spray or fog, carbon dioxide, or dry chemical to extinguish.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3.COMPOSITION/INFORMATION ON INGREDIENTS

Material		Wt %
Ammonium peroxydisulfate	CAS# 7727-54-0	15-20
Water	CAS# 7732-18-5	80-85
Total		100

SECTION 4. FIRST AID MEASURES

EFFECTS OF OVEREXPOSURE

FIRST AID:

Eye Contact: May cause irritation and pain. Seek medical attention.

Skin Contact: Corrosive to exposed skin. Flush skin well with water for 15 minutes. Remove affected clothing.

Inhalation: May irritate the mucous membranes. May cause lung edema. Symptoms may include throat irritation, shortness of breath, inflammation of nasal passages, and coughing. Asthma-like symptoms may develop.

Ingestion: May cause abdominal pain, nausea, and vomiting.

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. Do not use organic media.

Special fire fighting procedures: Wear chemically retardant gear and NIOSH approved self-contained breathing apparatus. Oxidizer. Heat of reaction with combustibles or reducing agents may enhance fire.

Explosion hazard when mixed with finely powdered organic matter, metal powder, or reducing agents.

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILLS, LEAKS: Ventilate area of leak or spill. Remove sources of ignition. Clean-up personnel should wear protective clothing and NIOSH approved respirator if no ventilation is available. 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 dust, mist, or vapor. Do not expose eyes, skin, or clothing. Keep container closed tightly. Avoid contact with combustibles. Do not use with metal tools or items. 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 metals, reducing agents, and organics. Empty containers may be hazardous.

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Respiratory protection: Wear NIOSH/MESA approved full or half face piece (with goggles) respiratory protective equipment to avoid exposure to mist. A respiratory protection program complying with requirements of 29CFR 1910.134 is recommended.

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.

waste to an approved waste disposal facility.

SECTION 14. TRANSPORTATION INFORMATION

Class 5.1

PG III

UN3139

Shipping Name: Oxidizing Liquid, N.O.S. (Ammonium Persulfate Solution)

SECTION 15. REGULATORY

Symbol: O, oxidizing

R-Phrases:

R8: Contact with combustible material may cause fire

R20/21/21: Harmful by inhalation, in contact with skin and if swallowed

R41: Risk of serious damage to eyes

S-Phrases:

S17: Keep away from combustible material.

S23-36/37/39-45 Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 16. OTHER INFORMATION

NFPA Codes:

Health: 2

Flammability: 0

Reactivity: 3

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

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TEL: (978) 777-7860

To: UMASS AMHERST		PO# CREDIT CARD		
Date: 01 Jul 2019		Inv# 171084		
Product	Quantity	Lot#	Date of Mfg	Expiration Date
APS COPPER ETCHANT 100	1 x 1 QUART	029750	01 Jul 2019	30 Dec 2019

This is to certify that this material meets the manufacturer's specification as to material, fabrication, inspection and lot identification.

	<u>SPECIFICATION</u>	<u>RESULT</u>
Ammonium Peroxydisulfate Concentration	188 – 190 g/L	189g/L
Chloride and Chlorate	0.001% max.	<0.0005%
Heavy Metals (as Pb)	0.005% max	<0.0005%
Iron (Fe)	0.001% max	<0.0005%
Manganese (Mn)	0.5 ppm	< 0.3 ppm

CERTIFICATION



C. Fisher, Quality Control