Ammonium Persulphate

410

Copper Etchant

Ammonium Persulfate crystals are used as an alternative to the traditional ferric chloride to produce a cleaner copper etchant solution. Mixed product must be stored in a vertical container.

One kilogram of crystals will produce four liters of etching solution when mixed with water.

Not compatible for use with Cat. # 416-RP Etch Resist Pen.

Available Sizes

Catalog Number	Sizes Available	Description
410-1KG	1kg (2.2 lbs.)	Crystals
410-25KG	25kg (55 lbs.)	Crystals

Material Safety Data Sheet

Section 1: Product Identification

MSDS Code: 410 **Name: Ammonium Persulphate**

Related Part Numbers: 410-1KG; 410-25KG

Use: For etching printed circuits.

Section 2: Hazardous Ingredients

CAS#	Chemical Name	Percentage by weight	ACGIH TWA	Osha Pel	Osha Stel
7727-54-0	Ammonium Persulphate	>99%	0.1mg/m³	N/e	N/e

Section 3: Hazards Identification

WHMIS Codes: C, E

NFPA Ratings: Health 2 Flammability 0 Reactivity 2

HMIS Ratings: Health 2 Flammability 0 Physical Hazard 2

Eyes: Causes eye irritation

Skin: May cause skin irritation.

Inhalation: Cause irritation of respiratory tract

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea.

Chronic: No information found.

Section 4: First Aid Measure

Eyes: Remove contact lenses. Flush with water. Get medical aid if irritation occurs or persist.

Skin: Wash skin with soap and water. Get medical aid if symptoms persist.

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

Ingestion: Do not induce vomiting. Rinse mouth with water. If conscious, give 1-2 glasses of water. Get doctor immediately. Never give anything by mouth to an unconscious person.

Section 5: Fire Fighting Measures

Autoignition Temperature: N/e **Flash Point:** N/a **LEL / UEL:** N/a

Extinguishing Media: Deluge with water.

General Information: Oxidizer. Greatly increases the burning rate of combustible materials. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Section 6: Accidental Release Measures

Spill Procedure: Sweep dry material into a plastic container. Provide adequate ventilation. For diluted material, sprinkle absorbent compound onto spill, then sweep into a plastic container. Wipe up further residue with paper towel and place into container. Wash spill area with soap and water.

Section 7: Handling and Storage

Handling: Use eye, skin and clothing protection. Do not ingest or inhale. Do not expose container to heat. Diluted product must be stored in a vented container as it will gas off and create pressure in a sealed container.

Storage: Store in a cool, dry, well-ventilated area, away from incompatible substances.

Section 8: Exposure Controls

Routes of entry: Eyes, ingestion, inhalation, and skin.

Ventilation: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.

Personal Protection: Wear appropriate protective eyeglasses or chemical safety goggles. Wear rubber or neoprene protective clothing to prevent skin contact. Use a NIOSH approved respirator when necessary.

Section 9: Physical and Chemical Properties

Physical State:	White crystals	**Odor:**	None	**Solubility:**	85g @25°C by weight	**Evaporation Rate:**	N/a		
Boiling Point:	N/a	**Specific Gravity:**	1.98	**Vapor Pressure:**	N/a	**Vapor Density:**	N/a	**pH:**	4

Section 10: Stability and Reactivity

Stability: Stable (becomes unstable in presence of heat, moisture and/or contamination.

Conditions to avoid: Heat, moisture and contamination.

Incompatibilities: Acids, alkalis, halides (fluorides, chlorides, bromides and iodides), combustible materials, most metals and heavy metals, oxidizable materials and other oxidizers, reducing agents, cleaners, and organic or carbon containing compounds. Contact with incompatible materials can result in a material decomposition or other uncontrolled reactions.

Polymerization: Will not occur.

Decomposition: Oxygen that supports combustion and oxides of sulfur.

Section 11: Toxicological Information

Sensitization: (effects of repeated exposure) May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

Carcinogenicity: (risk of cancer) No

Teratogenicity: (risk of malformation in an unborn fetus) No

Reproductive Toxicity: (risk of sterility) No

Mutangenicity: (risk of heritable genetic effects) No

Lethal Exposure Concentrations:	**Ingestion (LD50):**	742 mg/kg (Male rat)	**Inhalation (LC50):**	2.95mg/l (4h)(Rat)	**Skin (LD50):**	2000mg/kg Rabbit)	

Section 15: Regulatory Information

This product has been classified in accordance in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

SARA (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

None of the chemicals in this product have a reportable quantity.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45

This product does not contain any chemicals subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

CAA (Clean Air Act, USA)

This product does not contain any class 1-ozone depletors.

This product does not contain any class 2-ozone depletors.

This product does not contain any chemicals listed as hazardous air pollutants.

California Proposition 65 (Chemicals know to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

This product does not contain any chemicals listed.

Health Canada

Labeling and containers used in this product are listed in compliance with Consumer Chemicals and Container regulations.

Environment Canada

Chemicals in this product are listed on the Domestic Substances List in the Canadian Environmental Protection Act

This product does not contain any ozone depleting substances.

Industry and Science Canada

Labeling, product identity, net quantity declaration, minimum printing type size heights, and packaging of this product is in compliance with the Consumer Packaging and Labeling Act and Regulations. This product is not slack filled in accordance to chapter 4 prohibitions.

RoHS (The restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2004).

This product is RoHS compliant.

Section 16: Other Information

Definitions: N/a = not applicable, n/e = not established

Disclaimer: This material safety data sheet is provided as an information resource only. M.G. Chemicals believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.