

Sodium Persulphate



4101

Copper Etchant

Sodium Persulfate is a good replacement for Ammonium Persulfate for its compatibility with etch resist pens. Sodium Persulfate will not remove etch resist ink and like 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.

Directions

Dilute crystals slowly into 4 liters of water using a glass, plastic or stainless steel container. Stir until completely dissolved. To make less than 4 litres, dissolve 250 grams per liter of water.

Specifications

Parameter	Specifications
Assay	99% min
Active oxygen	6.65% min.
Iron ppm	5.000ppm max.
Moisture	0.06% max.
Ammonium persulfate	0.10% max.
Sodium sulfate	0.50% min. - 1.00% max.
Sulfuric acid	0.10% max.

Available Sizes

Catalog Number	Sizes Available	Description
4101-1KG	1kg (2.2 lbs.)	Crystals
4101-25KG	25kg (55 lbs.)	Crystals



Material Safety Data Sheet

Section 1: Product Identification

MSDS Code: 4101 **Name: Sodium Persulphate**

Related Part Numbers: 4101-1KG; 4101-25KG

Use: For etching printed circuits.

Section 2: Hazardous Ingredients

CAS#	Chemical Name	Percentage by weight	ACGIH TWA	Osha Pel	Osha Stel
7775-27-1	Sodium persulphate	>99%	N/e	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: Causes respiratory tract irritation.

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:	73% @25°C	Evaporation Rate:	N/a
Boiling Point:	N/a	Specific Gravity:	2.4	Vapor Pressure:	N/a	Vapor Density:	N/a
						pH:	5-7 @25°C

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

Mutagenicity: (risk of heritable genetic effects) No

Lethal Exposure Concentrations:	Ingestion (LD50): 895 mg/kg (rat)	Inhalation (LC50): 5.1/L (Rat)	Skin (LD50): 10g/kg
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Section 12: Ecological Information

General Information: Avoid runoff into storms and sewers, which lead into waterways. Water runoff can cause environmental damage.

Environmental Impact Data: (percentage by weight)

CFC: 0 HFC: 0 Cl.Solv: 0 VOC: 0 HCFC: 0 ODP: 0

Section 13: Disposal Information

General Information: Dispose of in accordance with all local, provincial, state, and federal regulations. Water runoff can cause environmental damage.

Section 14: Transportation Information

Ground Canada: (1 KG and smaller)

Classified as **Consumer Commodity**.

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations). **Recommend Shipper be trained and certified.**

Ground USA: (1 KG and smaller)

Classified as **ORM-D**. Refer to USA CFR 49 Regulations.

Recommend Shipper be trained and certified.

Ground Canada and USA: (sizes over 1 KG)

Shipper must be trained and certified. Refer to CFR 49 (USA), and TDG Regulations (Canada).

Shipping Name: **Sodium Persulphate**, UN number: **1505**, Class: **5.1**, Packing Group: **III**.

Hazard label required – Oxidizer.

Air: (1 KG size)

Shipper must be trained and certified. Refer to IATA Dangerous Goods Regulations.

Quantity limitations on air transport.

Shipping Name: **Sodium Persulphate**, UN number: **1505**, Class: **5.1**, Packing Group: **III**.

Refer to Packing Instruction: **Y516** for gross weight quantity limits.

Air: (25 KG size)

Prohibited for transport by air.

Sea:

Shipper must be trained and certified. Refer to IMDG regulations.

Shipping Name: **Sodium Persulphate**, UN number: **1505**, Class: **5.1**, Packing Group: **III**.

Section 15: Regulatory Information

This product has been classified 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.