

## Description

The 410 *Ammonium Persulphate* is a copper etchant compound used as an alternative to the traditional ferric chloride to produce a cleaner copper etchant solution. One kilogram of ammonium persulfate will produce four liters of etching solution when mixed with water.

## Benefits and Features

- **Transparent solution allows visual inspection of etching process**
- **Compatible with tin etch resist**
- **Non-staining solution**
- **CARB compliant**

## Usage Parameters

<i>Properties</i>	<i>Value</i>
Shelf Life	3 y

## Temperature Ranges

<i>Properties</i>	<i>Value</i>
Storage Temperature Limits <sup>a)</sup>	-16 to 27 °C [60 to 80 °F]

a) Cool, dry, and well ventilated area recommended.

## Properties

<i>Physical Property</i>	<i>Value</i>
Appearance	White crystalline salt
Odor	None
Molecular Weight	228.18 g/mol
Density @25 °C [77 °F]	1.98 g/mL
Melting Point	120 °C [248 °F] decomposes

## Health, Safety, and Environmental Awareness

Please see the 410 **Safety Data Sheet** (SDS) for more details on transportation, storage, handling and other security guidelines.

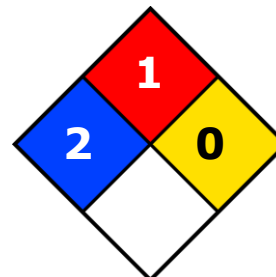
**Health and Safety:** Avoid breathing vapors/dusts. Wear protective gloves/clothing/eye protection. Wash hands thoroughly after handling.

Dispose of contents in accordance with all local, regional, national, and international regulations.

## HMIS® RATING

<b>HEALTH:</b>	* 2
<b>FLAMMABILITY:</b>	1
<b>PHYSICAL HAZARD:</b>	0
<b>PERSONAL PROTECTION:</b>	

## NFPA® 704 CODES



*Approximate HMIS and NFPA Risk Ratings Legend:*

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

## Application Instructions

Follow the procedure below for best results. If further directions for etching or making a printed circuit board (PCB), consult the photofabrication process guide available free from your dealer.

1. Dilute 250 g per L (2.2 lb per gallon) of ammonium persulfate to water.
2. Fully immerse copper board in solution.
3. (Optional) Agitate until etching action is complete.

### To speed up etching

- Warm the ammonium persulfate solution to 40 °C [104 °F].

**ATTENTION!** Use only glass or plastic containers.

**NOTE:** Recommended use of pressure release valve if storing for later use.

## Packaging and Supporting Products

<i>Cat. No.</i>	<i>Packaging</i>	<i>Net Weight</i>		<i>Packaging Weight</i>	
<b>410-1KG</b>	Bottle	1 kg	2.2 lb	7 kg <sup>a)</sup>	15 lb <sup>a)</sup>

a) Case pack of 6

### Related Products and Etching Kits

- *Economy Etching Kit:* Cat. No. 416-ES
- *Photofabrication Kit:* Cat. No. 416-K
- *Professional Etching Kit:* Cat. No. 416-E



ISO 9001 Registered Quality System.  
Burlington, Ontario, Canada QMI File # 004008

# Ammonium Persulphate 410 Technical Data Sheet

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## Technical Support

Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at [www.mgchemicals.com](http://www.mgchemicals.com).

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## Warranty

*M.G. Chemicals Ltd.* warrants this product for 12 months from the date of purchase by the end user. *M.G. Chemicals Ltd.* makes no claims as to shelf life of this product for the warranty. The liability of *M.G. Chemicals Ltd.* whether based on its warranty, contracts, or otherwise shall in no case include incidental or consequential damage.

## Disclaimer

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. *M.G. Chemicals Ltd.* does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.