



MOUNTING CONSUMABLES

PSI mounting consumables are used in most metallographic specimen preparation and analysis. Mounting a specimen will assist in achieving a precise analysis of the sample by offering easier handling, a larger flat surface, excellent edge retention, prolonged life of polishing consumables, and allows microhardness testing close to the edges of the sample. The information provided in this article is intended to offer information valuable in the selection of mounting products.

The two types of mounting materials used within the industry are compression (hot) and ambient (cold). Compression mounting involves a mounting press which generates heat and pressure in a cylinder to form the mold. Ambient mounting involves a liquid and a catalyst that cures (exothermic reaction) in a cup-type mold at room temperature.

Compression Mounting Products

- Phenolic powders and preforms are used for general and routine applications. Available in black, green, and red for color-coded specimens.
- Diallyl Phthalate powders are similar to Phenolic powders but are used for more specific applications. The blue powder offers excellent edge retention, chemical resistance, and dimensional stability. While achieving the same properties as the blue powder, the green powder is filled with shorter glass to achieve a harder surface. The copper-filled powder also achieves the same properties, but is composed of finer grains to fill voids and is conductive.
- Finamet powder is a glass-filled powder that is similar to Phenolic, but offers a stronger specimen adhesion and exceptional flow during mounting.
- Epoxy mounting powder is a glass-filled powder which offers a very hard surface and provides excellent specimen adhesion and edge retention.
- Conductive mounting powder consists of a copper-based material that provides high conductivity and superior edge retention which is used to make

conductive samples for scanning electron microscopes, energy and dispersive spectrometers, and electropolishing.

- Thermoplastic powder offers a transparent and softer mount for fragile sample applications due to the ability to be formed using a lower pressure.

Ambient Mounting Products

- KoldMount® is a translucent, two-part (powder/liquid) general acrylic mounting system which cures in 20-30 minutes at room temperature. Koldmount® provides a quality mount in a short time.
- Acrylic Fast Set is a bone white two-part (powder/liquid) acrylic mounting system which cures in 10-15 minutes at room temperature. The Acrylic Fast Set provides a quality mount for large volume applications.
- Epoxy Fast Set is a clear white two-part (liquid/liquid) epoxy mounting system which cures in 60 minutes at room temperature. The Epoxy Fast Set provides excellent edge retention, a hard surface, and good adhesion.

Mounting Accessories

- Mounting Cups
- Molds
 - Silicon Rubber
 - Phenolic
 - Glass
 - Metal
- Release Agents
- Specimen Lacquer
- Stirring Sticks
- Graduated Paper Cups
- Spring Clips
- and more



PSI maintains a large inventory of popular mounting products and accessories. Please contact the PSI Office to discuss your specific mounting requirements.

TYPICAL COMPRESSION SETTINGS

PHENOLIC		EPOXY		THERMOPLASTIC	
Temperature:	~300°F (150°C)	Temperature:	~325°F (165°C)	Temperature:	~360°F (185°C)
Pressure:	3800 - 4200 psi	Pressure:	3800 - 4200 psi	Pressure:	3800 - 4200 psi
Heating Time:	3 - 6 minutes	Heating Time:	5 - 12 minutes	Heating Time:	2 - 4 minutes
Cooling Time:	5 - 8 minutes	Cooling Time:	7 - 14 minutes	Cooling Time:	6 - 12 minutes

NOTE: Temperature, pressure and time will vary. It is common for heating elements to fluctuate, especially in heavily used equipment.