BUEHLER®

COMPRESSION MOUNTING COMPOUNDS

- Thermosetting, Thermoplastic, and Conductive Mounting Materials for Compression Mounting
- Fast, and Easy-To-Use Economical Compression Mounting Compounds
- Full Range of Products for Any Materials Application
- Consistent Results Every Time
- Compatible With All Mounting Presses and Molds
- Bulk Packaging Options for Volume Applications

BUEHLER® COMPRESSION MOUNTING COMPOUNDS

Thermosetting Powders

Black PHENOCURE™ Phenolic Powder is ideal for general mounting

Red PHENOCURE™ Phenolic Powder is designed for color coding the specimens

Green PHENOCURE™ Phenolic Powder provides an alternative color for specimens identification

EPOMET® G and EPOMET® F are the ultimate compounds for superior edge protection

Thermosetting Powders

PHENOCURE™ Phenolic Powder

- Proprietary formulation for repeatable, economical mounts
- Ideal for general mounting
- Fast mounting cycle
- Wood flour filled
- Moderate shrinkage
- Available in black, green, and red

Phenolic PREMOLDS™

- Premeasured, pressed powder provides correct amount of phenolic every time
- Convenient to handle and reduces molding time
- Eliminates messy powders
- Economical
- Wood flour filled
- Moderate shrinkage
- Fast mounting cycle
- Available in black, green, and red

EPOMET® G and F

- EPOMET® G with larger grain for general use
- EPOMET® F with fine grain for best penetration into cracks and small features
- Superior sample edge protection
- Excellent flow characteristics
- Very low shrinkage
- High hardness
- Abrasion resistant
- Chemical resistant
- For optimum planarity and edge retention

EPOMET® G and EPOMET® F Mounting Compounds

Five filled epoxy edge retention compounds are compared in Figure 1 (right). Identical nitrided steel samples were used for comparison.

The product in Figure 1A had the lowest hardness of the group. Thus the mounting material abraded at a faster rate than the specimen, resulting in the steel's edges being exposed to the rounding effects of polishing. The resulting indistinct appearance at the edge of the nitrided layer makes evaluation and measurement extremely difficult.

The compound in Figure 1B had excellent hardness. However, the flow characteristics did not allow the resin to cure with intimate contact to the steel. Without intimate contact, the edge of the notrided layer is not adequately protected.

Figure 1C illustrates a compound with excessive shrinkage characteristics. This shrinkage produced a large gap between the mounting compound and the nitrided layer. The excessive tensile stresses produced during shrinkage resulted in the nitride layer being pull away from the steel and fracturing.

Figure 1D illustrates a product with poor particle grading. The large particles restricted the free flow of resin. As a result, proper edge protection was not achieved, and the nitrided edge rounded during polishing giving an indistinct appearance.

When all desired properties are balanced within a single molding compound, the result is superior edge protection. Figure 1E illustrates an EPOMET® G mounted specimen. The distinct, unrounded appearance of the steel at the molding compound interface illustrates a well-protected edge. The nitrided layer is intact, and the edge is sharply defined for accurate measurement and analysis.

EPOMET® F gives excellent results, like EPOMET G, and with its finer grains is designed to penetrate the smallest cracks and features.

Conductive Mounting Powders

PROBEMET®

- New proprietary formulation is ideal for SEM, EDS, WDS, and microprobe analysis and electropolishing
- High conductivity - copper filler gives near zero electrical resistance
- Extra fine particles fill small voids and cavities
- Superior edge retention
- Good hardness

KONDUCTOMET®

- Carbon filled phenolic resin
- Carbon filler eliminates interference in metal composition analysis
- Easy-to-use, no mess grains
- Combines speed and economy of phenolic resin with conductive properties
- Medium conductivity

Thermoplastic Mounting Material

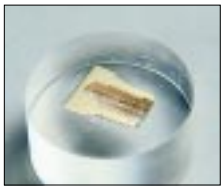
TRANSOPTIC™ Powder

- Transparent mounts in just minutes
- Lower mounting pressures can be used during preheating and mounting cycles
- Perfect for encapsulating fragile samples

Note: All thermosetting materials perform best when cooled under pressure. Air or water cooling is either built-in or is available in add-on jackets for all Buehler mounting presses.

BUEHLER Conductive and Thermoplastic mounting materials

KONDUCTOMET® is fast, easy-to-use and economical



TRANSOPTIC™ Powder produces clear mounts

PROBEMET® gives near zero resistance and great edge retention

The new SIMPLIMET® 1000 & 3000 mounting press product line is fully automatic with microprocessor control and fast cycle times

SIMPLIMET® 2 manual mounting press–low cost and durable

Figure 1. Comparison of Five Edge Retention Compression Mounting Compounds

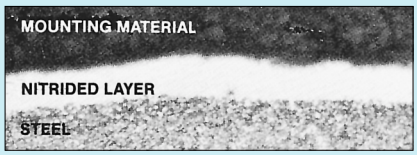


Figure 1A. Low Hardness

Figure 1B. Poor Flow

Figure 1C. Shrinkage

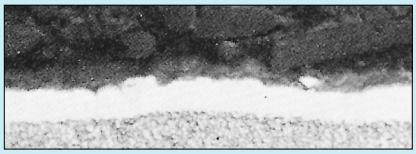


Figure 1D. Poorly Graded Filler

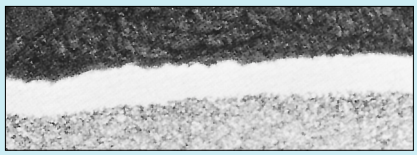


Figure 1E. Well Balanced EPOMET® G

Comparison of 5 edge retention compression molding compounds. As polished Nitrided Steel Specimens, Mag. 500x.

Ordering Information

Thermosetting Powders

Material	Color	Filler	Quantity	Number
PHENOMET® Phenolic Powder	Black	Wood Flour	5 lbs. (2.3kg)	20-3100-080
	Black	Wood Flour	25 lbs. (11.5kg)	20-3100-400
	Red	Wood Flour	5 lbs. (2.3kg)	20-3200-080
	Red	Wood Flour	25 lbs. (11.5kg)	20-3200-400
	Green	Wood Flour	5 lbs. (2.3kg)	20-3300-080
	Green	Wood Flour	25 lbs. (11.5kg)	20-3380-400
EPOMET® G (formerly EPOMET)	Black	Silica Fiber	4 lbs. (1.84kg)	20-3380-064
	Black	Silica Fiber	25 lbs. (11.5kg)	20-3380-400
EPOMET® F	Black	Silica Fiber	4.4 lbs. (1.84kg)	20-3381-070

Conductive Mounting Powders

Material	Color	Filler	Quantity	Number
PROBEMET™	Bronze	Copper	4 lbs. (1.84kg)	20-3385-064
KONDUCTOMET®	Gray	Carbon	1 lb. (0.45kg)	20-3375-016

Thermoplastic Mounting Powders

Material	Color	Filler	Quantity	Number
TRANSOPTIC™	Transparent	None	5 lbs. (2.3kg)	20-3400-080

PHENOMET® Phenolic Premolds

Size	Color	Filler	Quantity	Number
1″ (25.4mm) Premold	Black	Wood Flour	100	20-3111-100
	Black	Wood Flour	500	20-3111-500
	Black	Wood Flour	500 Bulk Packed	20-3111-501
1¼″ (32mm) Premold	Black	Wood Flour	100	20-3112-100
	Black	Wood Flour	500	20-3112-500
	Black	Wood Flour	500 Bulk Packed	20-3112-501
	Red	Wood Flour	100	20-3212-100
	Red	Wood Flour	500	20-3212-500
	Red	Wood Flour	500 Bulk Packed	20-3212-501

PHENOMET® Phenolic Premolds

Size	Color	Filler	Quantity	Number
1¼″ (32mm) Premold	Green	Wood Flour	100	20-3312-100
	Green	Wood Flour	500	20-3312-500
	Green	Wood Flour	500 Bulk Pkd	20-3312-501
1½″ (38mm) Premold	Black	Wood Flour	100	20-3113-100
	Black	Wood Flour	500	20-3113-500
	Black	Wood Flour	500 Bulk Pkd	20-3113-501
	Red	Wood Flour	100	20-3213-100
	Red	Wood Flour	500	20-3213-500
	Red	Wood Flour	500 Bulk Pkd	20-3213-501
	Green	Wood Flour	100	20-3313-100
	Green	Wood Flour	500	20-3313-500
	Green	Wood Flour	500 Bulk Pkd	20-3313-501

Accessories

Description	Quantity	Number
Simplex Hydraulic Oil	1 pt. (0.47*l*)	20-3016
	1 qt. (0.95*l*)	20-3032
Gloves, for handling warm mounts	Pair	20-3040
METCOAT™	6 oz. (0.17kg)	20-8190
Silicon Mold Release, Spray	6 oz. (0.17kg)	20-3046
Thermometer for PNEUMET® and SIMPLIMET® Presses		20-3052
Thermometer for Specimen Mount Press		20-3055
Release Agent with Swab	2 oz. (0.03*l*)	20-8185-002
Release Agent Refill	½ pt. (0.24*l*)	20-8185-008
	1 pt. (0.47*l*)	20-8185-016
	1 qt. (0.45*l*)	20-8185-032

Buehler continuously makes product improvements: therefore, technical specifications are subject to change without notice.

For a complete listing of Buehler Consumable Supplies; please refer to Buehler's Consumables Buyers Guide.

BUEHLER

BUEHLER LTD. – *Worldwide Headquarters*
41 Waukegan Road • P.O. Box 1
Lake Bluff, Illinois 60044-1699 USA
Tel: 847/295-6500 • Fax: 847/295-7979
Sales: 1/800/BUEHLER • 1/800/283-4537
Web Site: http://www.buehler.com

WIRTZ-BUEHLER GMBH
In der Steele 2 • 40599 Düsseldorf
Postfach 16 03 55 • 40566 Düsseldorf
Telefon: (+49) 0211/974100 • Telefax: (+49) 0211/974/1079
Web Site: http://www.wirtz-buehler.de

KRAUTKRAMER FRANCE – *BUEHLER Division*
68, Chemin des Ormeaux
69760 Limonest
Téléphone: (+33) 04/72/17/92/50 • Télécopie: (+33) 04/78/47/56/98

BUEHLER KRAUTKRAMER
Milburn Hill Road • University of Warwick Science Park
Coventry CV4 7HS United Kingdom
Tel: (+44) (0) 24 7669 2242 • Fax: (+44) (0) 24 7669 3032