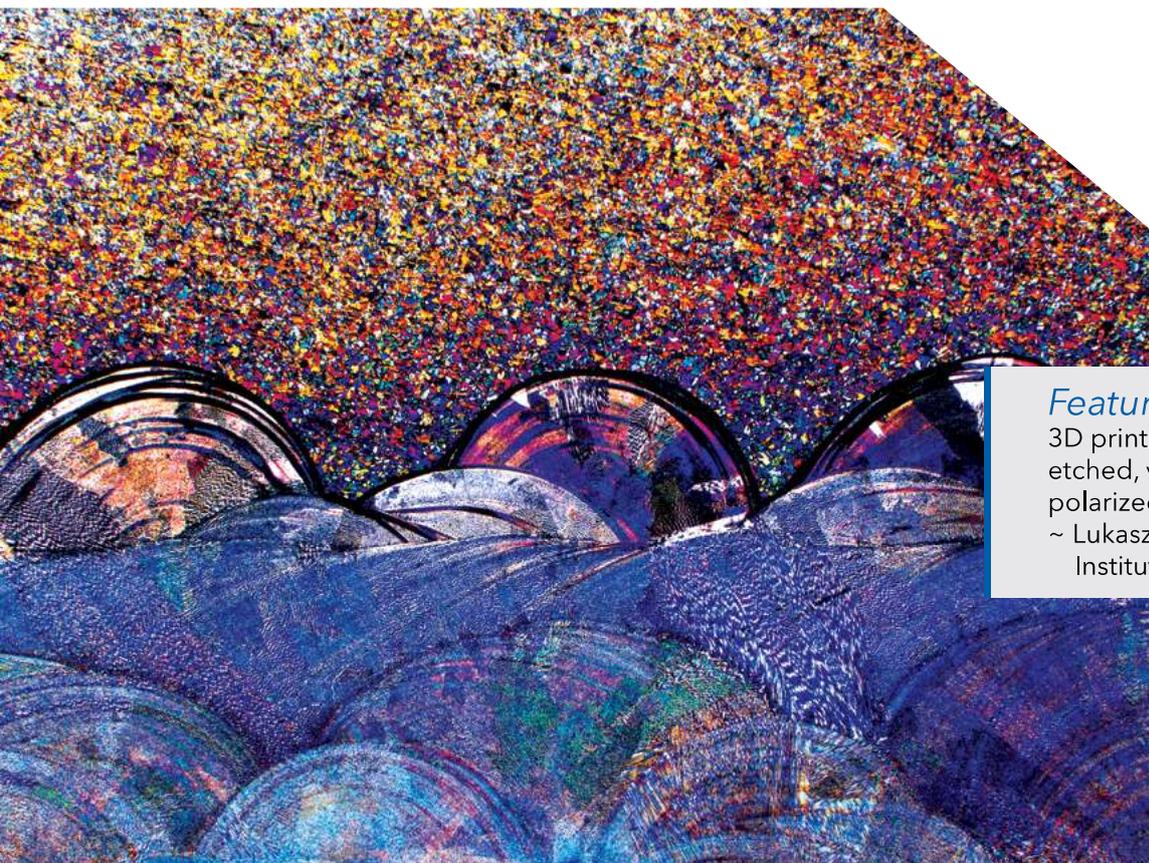


# MOUNTING

Automated compression mounting presses, vacuum systems and over 20 types of mounting media

Mounting your specimens is important for ease of handling and preservation of the sample edge. When deciding on which mounting technique to use, consider the size and geometry of your part, the part's susceptibility to heat and pressure, and the desired throughput.



## *Featured Microstructure:*

3D printed maraging steel, color etched, viewed at 50x mag. under polarized light

~ Lukasz Boron; Foundry Research Institute in Kraków; Kraków, Poland



# Consumables & Accessories

## Mounting Consumables & Accessories

### Pigments



Use with castable resins for color coding or creating contrast

- 20-8505 Black, 1.5oz [45mL]
- 20-8506 Red, 1.5oz [45mL]
- 20-8507 Blue, 1.5oz [45mL]

### Release Agent



Liquid release agent for easier removal of mounts from castable molds or compression mounting presses

- 20-8186-004<sup>†</sup> 4oz [120mL]
- 20-8186-032<sup>†</sup> 32oz [950mL]

### Mold Release Spray



Less hazardous spray release agent for use on castable mounting molds

- 20-3050-008 8oz [0.24L]

### Mold Release Powder



Powder release agent for use on mounting presses

- 20-3048 2oz [45g]

### SamplKlip



Stainless Steel support clip for use with all mounting systems.\*

- 0.25 H x 0.550 W x 0.350in L [6 x 14 x 9mm] 0.575g

- 20-4000-100 (Qty 100)

### SamplKlip I



Plastic support clip best for castable mounting systems.\*

- 0.25 H x 0.475 W x 0.3in L [~6 x 12 x 8mm] 0.230g
- 20-4100-100 (Qty 100)

- 0.25 H x 0.425 W x 0.25in L [~6 x 11 x 6mm] 0.230g
- 20-4100-100S (Qty 100)

### Specimen Support Clip



Plastic support clip best for castable mount systems.\*

- 0.25 H x 0.290 W x 0.375in L [6 x 7 x 9.5mm] 0.145g

- 20-4001-000 (Qty 1000)

### UniClip Support Clip



Plastic support clip for use with all mounting systems.

- 0.4 H x 0.360 W x 0.500in L [10 x 9 x 13mm] 0.290g

- 20-5100-100 Clear (Qty 100)
- 113043 Black (Qty 100)

### Plastic Mixing Cup



Graduated Plastic Mixing cup for mixing castable mounting systems. 8.5oz [250mL] (Qty 100)

- 20-8176-100

### Paper Mixing Cup



Non Graduated Paper Mixing cup for mixing castable mounting systems. 5oz [148mL] (Qty 100)

- 20-8177-100

### Stirring Sticks



For stirring castable mounting systems. (Qty 1000)

- 20-8175

### MetKleer™ Adhesive Bases



For use with ring forms and castable systems.

- 4 x 5in [102 x 127mm] (Qty 10)
- 20-8188

### Conductive Filler



Nickel-based filler makes castable mounting systems conductive

- 20-8500 2 lb [0.9kg]

### Flat Edge Filler



Enhances edge retention in castable mounting systems by increasing hardness of mount

- 20-8196 1 lb [0.45kg]

### Thermoplastic Cement



For adhering samples to glass slides or other specialty holders

- 40-8100 Use at 266° F [130°C] (Qty 12)

### Crystalbond Mounting Wax



For adhering samples to glass slides or other specialty holders

- 40-8150 Use at 257°F [125°C]
- 20-8145 Use at 127°F [53°C]

\* Compatible with specimens up to 0.200in [5mm] thick

• Compatible with specimens between 0.0035 - 0.090in [0.9 - 2.3mm]

† Restricted article, requires special packaging



# Compression Mounting

## Protect the integrity of your samples

Compression Mounting is the preferred method for optimal edge preservation and highest throughput. Buehler carries compression mounting systems and mounting compounds designed to fit the varying needs of different labs.



## SimpliMet™ 4000 Mounting Press

The fastest mounting press designed for 24/7 use. Eliminate bottlenecks at the mounting stage, rapidly transforming your cut samples to specimens ready for grinding and polishing.

Part Number	Mold Assembly
20-1011-5001	with 1in Mold
20-1011-5025	with 25mm Mold
20-1011-5125	with 1.25in Mold
20-1011-5030	with 30mm Mold
20-1011-5150	with 1.5in Mold
20-1011-5040	with 40mm Mold
20-1011-5050	with 50mm Mold

**Dimensions:** 12.25in [311mm]W x 26in [662mm]D x 20.62in [524mm] open  
12.25in [311mm]W x 26in [662mm]D x 19.62in [498mm] closed

**Voltage/Frequency:** 85-264VAC, 50/60Hz

**Weight:** 120lb [54kg]

### High reliability in 24/7 use environments

The SimpliMet 4000 was tested in extreme conditions and simulated the duty cycle of the busiest labs in the world. This machine provides high reliability in continuous use environments.

### Optimize productivity in your space

The SimpliMet 4000 packs fast mounting cycles into limited bench space, optimizing productivity. Fast duplex mounting allows two mounts to be made during the same cycle with minimal increase in cycle time.

### Ease of use saves time and protects sample quality

The simple user interface limits errors and protects the quality of your sample prep. Everything you need is right on the front panel. Use the SimpliMet 4000 out of the box without the wait.

### Comfortable to use

The single handed closure mechanism engages quickly, moving you right into your next task

### Chamfer Ram

Increase your grinding and polishing efficiency with a Chamfer Ram. Chamfer rams eliminate sharp edges by creating a beveled edge around the working face of the sample. This saves time and consumable costs during your grinding step.

Part Number	Description	Part Number	Description
2011122	1.25in Chamfer ram and spacer	2011124	1.5in Chamfer ram and spacer
2011123	30mm Chamfer ram and spacer	2011125	40mm Chamfer ram and spacer
		2011127	50mm Chamfer ram and spacer



# Compression Mounting Compounds

Compression mounting compounds utilize heat and pressure to encapsulate a specimen. Buehler's compounds minimize shrinkage while protecting and preserving sample edges during the preparation process.

## Wide Portfolio for Every Application

The choice of a mounting compound depends on the goals of the lab and requirements of final analysis. See below for the many different compounds that are available to meet the needs of a lab.

## Excellent Edge Retention

EpoMet offers excellent edge retention making it ideal for processing harder materials. The fine particle size of EpoMet F is great for intricate structures and penetration while the granular size of EpoMet G is easier and cleaner to use.

## Quick Cycle Set-Up with No Mess

Save time and maximize cleanliness by eliminating the measuring and pouring of powder. Simply place a PhenoCure premold into the mounting chamber and the cycle is ready to begin.

Material	Recommended Use	Color	Hardness (Shore D)	Edge Retention
PhenoCure™	General purpose metallography	Black, Red, Green	~88	Good
Diallyl Phthalate - Mineral Filled	Moderately hard material	Blue	~91	Better
Diallyl Phthalate - Glass Filled	Moderately hard material for etching	Blue	~91	Better
EpoMet™ G (Granular)	Very hard material	Black	~94	Best
EpoMet™ F (Fine)	Very hard material with complex geometries	Black	~94	Best
TransOptic™	When transparency of the mount is useful	Clear	~80	Good
KonductoMet™	SEM analysis when carbon is not the object of analysis	Black	~88	Good
ProbeMet™	SEM analysis when copper is not of interest. Great for electropolishing	Copper	~94	Better

## General Purpose Compounds



A wood-flour phenolic thermoset resin that provides good edge retention and moderate shrinkage.

\* A wood-flour thermoset resin that provides good edge retention and moderate shrinkage with less hazardous ingredients.

Size	Black	Red	Green
5 lbs [2.3kg]	20-3100-080 20-6100-080*	20-3200-080	20-3300-080
25 lbs [11.3kg]	20-3100-400 20-6100-400*	20-3200-400	20-3300-400
40 lbs [18.1kg]	20-3100-500 20-6100-500*	20-3200-500	20-3300-500



Premolds reduce mess and save time. Simply place the premold over the specimen in the mold cylinder. Premolds are sold 500/pack.

Size	Black	Red	Green
1in [25mm]	20-3111-501		
1.25in [32mm]	20-3112-501	20-3212-501	20-3312-501
1.5in [38mm]	20-3113-501	20-3213-501	20-3313-501
1.75in [45mm]	20-10090		



# Compression Mounting Compounds

## General Purpose Compounds

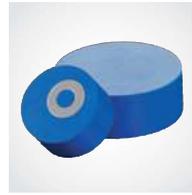


### EpoMet™ G (Granular)

A mineral filled epoxy thermoset with excellent edge retention for mounting hard materials.

20-3380-064	4 lbs [1.8kg]
20-3380-160	10 lbs [4.5kg]
20-3380-400	25 lbs [11.3kg]
20-3380-500	40 lbs [18.1kg]

Black ●



### Diallyl Phthalate

A filled thermoset resin recommended for mounting moderately hard materials. Choose glass filled for etching or mineral filled for better abrasion resistance.

20-3330-080	Mineral Filled, 5 lbs [2.3kg]
20-3340-080	Glass Filled, 5 lbs [2.3kg]

Blue ●

## Specialty Compounds



### EpoMet™ F (Fine)

A mineral filled epoxy thermoset with fine particles and excellent edge retention for mounting hard materials with complex geometries.

20-3381-070	4 lbs [1.8kg]
20-3381-160	10 lbs [4.5kg]
20-3381-400	25 lbs [11.3kg]

Black ●



### TransOptic

A transparent thermoplastic acrylic that allows the user to easily extract the specimen from the mount with reheating. Requires a special cooling cycle available on the SimpliMet™ 4000.

20-3400-080	5 lbs [2.3kg]
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Clear ○



### KonductoMet

A graphite and mineral filled phenolic thermoset recommended for SEM analysis of specimens when carbon is not the object of analysis.

20-3375-016	1 lbs [0.45kg]
20-3375-400	25 lbs [11.3kg]

Black ●



### ProbeMet

A copper and mineral filled phenolic thermoset recommended for SEM analysis of specimens when copper is not the object of analysis. *Note:* Can cause a Cu-Al galvanic corrosion on aluminum specimen.

20-3385-064	4 lbs [1.8kg]
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Copper ●

## Compression Mounting Tips



You can minimize shrinkage and improve edge retention by cooling the mount to room temperature under pressure before removing it from the mounting press.



Uncured mounts can be caused by excess moisture in the mounting compound. Make sure to properly close the container between uses.



Radial splitting of mounts is often caused by sharp edges on the sample, by samples that are too large for the mold or samples that are too close to the mold wall. Round off sharp corners and move the specimen farther from the edge of the mount.



Bulging or soft mounts are a result of insufficient cure times. Increase the cure time.



Unfused or frosted mounting compound is often a sign of insufficient molding temperatures or pressures. Ensure the temperature and pressure settings on the mounting press match the recommendations for the compression compound being using.