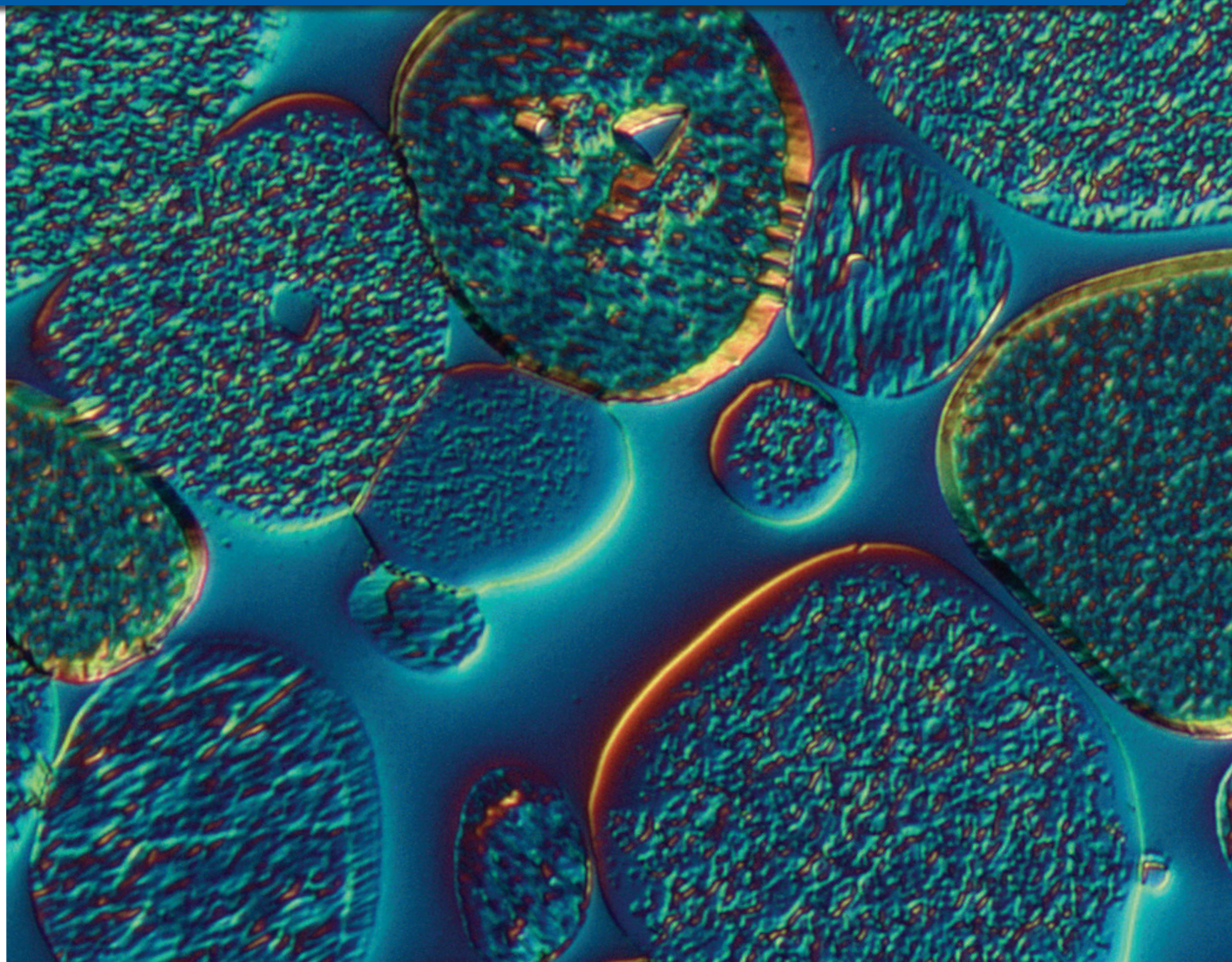


MOUNTING

Get the most from your mounting step with straightforward solutions for a variety of lab requirements.



High Performance Choices

Buehler epoxies are formulated to excel in a wide variety of applications. Whether the priority is speed, pore penetration, or low curing temperature, there is a Buehler epoxy suited for every sample type.

EpoKwick® FC



Spend less time preparing and more time analyzing.

- Combines very low viscosity and extremely low shrinkage with good hardness and a fast cure.
- Obtain the best sample prep quality even with highly porous samples.
- Recommended for aerospace coatings and other porous samples insensitive to heat.

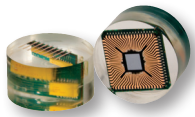
EpoThin™ 2



Protect samples with this gentle low cure temperature epoxy

- Combines low viscosity and low cure temperature
- Provides strong adherence and good pore penetration.

EpoxiCure® 2



General purpose epoxy system optimized for routine application

- A balanced formula providing good hardness and low shrinkage
- Can be used with larger mounting cups
- Recommended for heat sensitive materials

EpoHeat® CLR



Save time with long pot life

- Can remain mixed at room temperature for 3 hours and cures in 60 minutes in the oven.
- Water-like viscosity when heated
- Recommended for samples requiring maximum pore penetration.
- Use when mixing and pouring a high volume of media.

Product Specifications

Material	Cure Time	Viscosity*	Shrinkage*	Shore D Hardness	Peak Exotherm*
EpoKwick® FC	2hrs @ room temperature	Best	Best	~82	250°F [121°C]
EpoThin™ 2	9hrs @ room temperature	Better	Better	~78	149°F [65°C]
EpoxiCure® 2	6hrs @ room temperatures	Good	Better	~80	104°F [40°C]
EpoHeat® CLR	1hr @ 149° F(65°C)	Best	Good	~82	324°F [162°C]

*values compared with other epoxies

*Peak exotherm is for 20g cured at 70° F

Ordering Information

Small Resin & Hardener

Large Resin & Hardener

Material	Resin	Hardener†	Resin	Hardener†
EpoKwick® FC mix ratio 4:1 by volume			20-3453-128 128oz [3.8L]	20-3453-032 32oz [0.95L]
EpoThin™ 2 mix ratio 2:1 by volume	20-3440-032 32oz [0.95L]	20-3442-016 16oz [0.48L]	20-3440-128 128oz [3.8L]	20-3442-064 64oz [1.9L]
EpoxiCure® 2 mix ratio 4:1 by volume	20-3430-064 64oz [1.9L]	20-3432-016 16oz [0.48L]	20-3430-128 128oz [3.8L]	20-3432-032 32oz [0.95L]
EpoHeat® CLR mix ratio 4:1 by volume	20-3423-064 64oz [1.9L]	20-3424-016 16oz [0.48L]		

† Restricted article, requires special packaging

Increased Mounting Throughput

With cure times as low as 5 minutes, our line of acrylics is designed to increase throughput in your mounting process while providing consistent results.

SamplKwick®



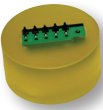
SamplKwick offers quick cure times and excellent wetting characteristics making it ideal for electronics and PWB applications.

VariKleer™



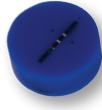
VariKleer produces a crystal clear mount when cured under pressure making it ideal for applications where clarity is required.

VariDur™ 10



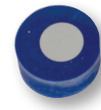
VariDur 10 is a general purpose acrylic system offering a semi-transparent mount with a reduced odor while curing.

VariDur™ 200



VariDur 200 is a quick curing acrylic with good edge retention that is ideal for mounting hard materials.

VariDur™ 3003



VariDur 3003 is a three-part acrylic with minimal shrinkage and high hardness making it ideal for edge retention applications.

Product Specifications

Material	Cure Time	Viscosity*	Shrinkage*	Shore D Hardness	Peak Exotherm*
SamplKwick®	5-8min @ room temperature	Better	Good	~85	~179°F [81°C]
VariKleer™	5-15min @ room temperature	Better	Good	~84	~212°F [100°C]
VariDur™ 10	8min @ room temperature	Good	Good	~80	~212°F [100°C]
VariDur™ 200	5-8min @ room temperature	Good	Better	~85	~212°F [100°C]
VariDur™ 3003	15-30min @ room temperature	Good	Best	~90	~252°F [122°C]

*values compared with other acrylics

*Peak exotherm is for 20g cured at 70° F

Ordering Information

Material	Powder		Liquid†	
	Part Number	Size	Part Number	Size
SamplKwick®	20-3562	1 lb [0.45kg]	20-3564	12oz [0.36L]
	20-3566	5 lbs [2.3kg]	20-3568	64oz [1.9L]
	20-3562-025	25 lbs [11.3kg]	20-3564-320	2.5gal [9.5L]
	20-3562-100	100 lb [45kg]	20-3564-640	5gal [19L]
VariKleer™	20-3591	2.2 lbs [1kg]	20-3592	16.9oz [500mL]
	20-3591-002	4.4 lbs [2kg]	20-3592-001	33.8oz [1L]
	20-3591-010	22 lbs [10kg]	20-3592-005	1.3gal [5L]
VariDur™ 10	11-1027	2.2 lbs [1kg]	11-1029	16.9oz [500mL]
	11-1031	22 lbs [10kg]	11-1033	1.3gal [5L]
VariDur™ 200	11-1030	2.2 lbs [1kg]	11-1029	16.9oz [500mL]
	11-1034	22 lbs [10kg]	11-1033	1.3gal [5L]
VariDur™ 3003 3-part system	20-3531	3.3 lbs [1.5kg]	20-3535	.65gal [2.5L] Liquid 1
	20-3534	16.5 lbs [7.5kg]	20-3536	1.3gal [5L] Liquid 2
			20-3532	Kit Contains: 16.9oz [500mL] Liquid 1 33.8oz [1L] Liquid 2

† Restricted article, requires special packaging

See page 32 for castable mounting tips

SimpliVac™

Our new vacuum system with unique multi-cycle capabilities, offers excellent pore impregnation in a compact format. Using your compressed air source, this system quickly and efficiently pulls a vacuum to evacuate trapped air from any porous samples, resulting in optimized edge retention and additional support for processing delicate samples.

High efficiency

- Large chamber diameter allows for a high volume of samples to be processed, while the sample tray also provides ample room for larger samples to fit easily in the chamber.

Simple Dispensing

- Use dispensing tubes and the built-in rotating turn table to dispense epoxy while under vacuum.

Programmability

- Set the number of cycles, vacuum level and time under vacuum
- Allows for multiple cycles to run without user interference, creating consistency while reducing active user time to process samples

Part Number	Voltage/Frequency
20-1500	100-240 VAC/ 50-60 HZ, Single Phase




Includes vacuum bowl liner and tray liner, no dispensing tubes included



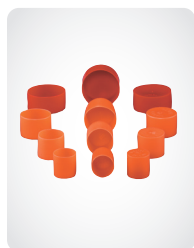
Vacuum Chamber

Dimensions: 12.8in (325 mm) H X 19.2in (488 mm) D X 18.6in (472 mm) W
Weight: 51lb (23 kg)

Accessories

		
Dispensing tubes (Qty 100) 20-1551	Vacuum Bowl Liner (Qty 5) 20-1553	Vacuum Tray Liner (Qty 100) 20-1555

Ring Forms & Castable Molds



Disposable Mounting Cups

Best for mounting low exotherm castable systems like EpoxiCure® 2 and EpoThin® 2. Also great for specimen storage (Qty 50)

20-8280	1in x 1in H
20-8281	1.25in x 1in H
20-8282	1.5in x 1in H



Plastic Ring Forms

Provides a stronger fit of the castable mount to the sample holder for polishing in central force mode. (Qty 100)
**Not recommended for acrylics*

20-8151-100	1in
20-8152-100	1.25in
20-8153-100	1.5in
20-8154-100	2in



SamplKup™

Reusable with best dimensional stability and suitable for use with all Buehler castable systems. (Qty 12) **not for use in ovens*

20-9178	1in x 1in H	20-9177	25mm x 1in H
20-8180	1.25in x 1in H	20-9179	30mm x 1in H
20-9181	1.5in x 1in H	20-9182	40mm x 1in H
20-9184	2in x 1in H	20-9183	50mm x 1in H



EPDM Round & Rectangular Molds

Suitable for use with all Buehler castable systems. Best choice for large, rectangular mounts and for curing mounts in ovens

EPDM Round Molds (Qty 5)

20-8181	1in dia x 5/8in H
20-8182	1.25in dia x 5/8in H
20-8183	1.5in dia x 5/8in H
20-8184	2in dia x 1in H
20-7183	40mm dia x 31mm H
20-7184	50mm dia x 31mm H

EPDM Rectangular Molds (Qty 1)

20-7185	2.2 x 1.2 x 0.9in [55 x 30 x 22mm]
20-6185	2.5 x 1.4 x 1.8in [63 x 25 x 46mm]
20-7186	2.8 x 1.6 x 0.9in [70 x 40 x 22mm]
20-6186	6 x 4 x 2in [150 x 100 x 50mm]
20-6187	6 x 3 x 1in [150 x 76 x 25mm]

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† 4oz [120mL]
 20-8186-032† 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. 8oz [236mL] (Qty 100)

20-8178-100

Stirring Sticks



For stirring castable mounting systems. (Qty 1000)

20-8175

Conductive Filler



Nickel filler makes castable mounting systems conductive

20-8500 2 lb [0.9kg]

Flat Edge Filler



Ceramic Powder enhances edge retention in castable mounting systems by increasing hardness of mount

20-8196 1 lb [0.45kg]

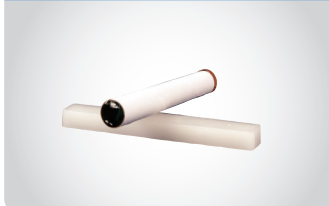
Thermoplastic Cement



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

† Restricted article, requires special packaging

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

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

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.

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 makes the machine easy to use and helps the user protect the quality of sample prep. Everything the user needs 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



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]

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

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	Mold Assembly
2011122	1.25in Chamfer ram and spacer
2011123	30mm Chamfer ram and spacer
2011124	1.5in Chamfer ram and spacer
2011125	40mm Chamfer ram and spacer
2011127	50mm Chamfer ram and spacer



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 optimizes ease of 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
PhenoCure® LP	General purpose metallography lower hazard level	Black	~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
ProbeMet®	Great for Electropolishing and electroetching. Can be used for SEM when copper is not of interest	Copper	~94	Better
KonductoMet®	SEM analysis when ProbeMet is not suitable	Black	~88	Good

General Purpose Compounds



The PhenoCure and PhenoCure LP powders are wood-flour thermoset resins that provide good edge retention and moderate shrinkage. While the PhenoCure LP also provides a lower hazard level at the same performance.

PhenoCure

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

PhenoCure LP

Size	Black
5 lbs [2.3kg]	20-6100-080
25 lbs [11.3kg]	20-6100-400
40 lbs [18.1kg]	20-6100-500



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		

Specialty Compounds

Click [Here](#) to shop Specialty Compounds

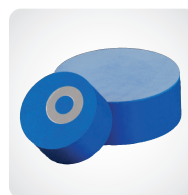


EpoMet® G (Granular)

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 ●



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]

Clear ○

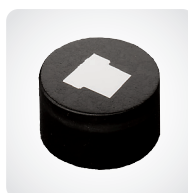


ProbeMet®

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]

Copper ●



KonductoMet®

A graphite and mineral filled phenolic thermoset recommended for SEM analysis of specimens when ProbeMet is not suitable.

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

Black ●

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. This is done automatically on the SimpliMet 4000



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.

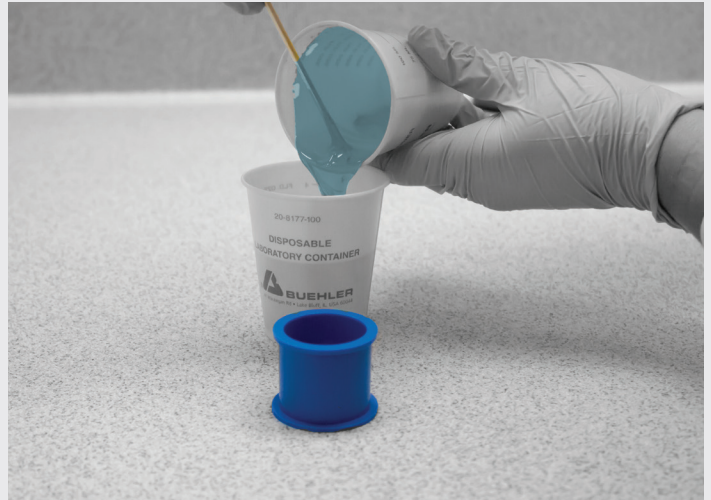


Unfused or frosted mounting compound is often a sign of insufficient molding temperatures or pressures. Ensure the temperature and pressure settings on the mounting press match the recommendations for the compression compound being using.

Castable Mounting Tips

Epoxy Tips

- Some epoxies can be cured more quickly by gently heating, typically at 30-40° C. Use caution as higher cure temperatures can cause excessive heating during curing.
- When mixing, tilt the cup containing the resin and hardener slightly and gently work the resin and hardener together using a lift and stir motion.
- To get the best results, use a vacuum system to evacuate air trapped in epoxy systems and samples. This helps wick epoxy into the the specimen to help support cracks, pores, and/or internal components.
- Epoxies are sensitive to the ratio of resin and hardener. Be sure to follow the recommended mass ratio for each product.



Acrylic Tips

- Acrylics cure quickly so it is highly recommended to pour the mixture into the mold immediately after mixing to prevent "gelling".
- Acrylic systems are not for use with Vacuum Systems because the vapor released can eliminate the vacuum nor are they for use with Disposable Mounting Cups because the heat of the reaction will degrade the plastic cup and produce a bad mount edge.
- To improve edge retention for acrylic systems, coat the sample in the liquid hardener before pouring in mixed compound.



See Mounting Guide for More Information

Shelf life is defined as the length of time listed products are considered best suitable for performance. This does not mean that a product will not perform beyond this time period, nor does it mean that the product will be usable continuously for this time frame. The shelf life is independent of the warranty* period as defined below. The shelf life depends on proper storage - i.e. Abrasive Cut-Off Wheels must be stored lying flat and in a dry location. Stored standing up or in a humid area breaks down the wheel composition.

Product Name	Shelf Life**
Abrasive Cut Off Wheels	2 years
CarbiMet Paper, PSA or S Backed	1 year
CarbiMet Paper, Plain Backed	2 years
Acrylic Systems	1 year
Aluminum Oxide Powder	2 years
Apex® Bimetallic Plate	1 year
Apex CGD and DGD	1 year
ApexHercules Grinding Disc	1 year
Apex Magnetic Disc	1 year
Apex S Carrier Films	1 year
AutoMet® Lapping Oil	2 years
Cool 3 Fluid	2 years
Diallyl Phthalate Powder	2 years
Epoxy Systems	1 year
EpoMet® F & G Powder	1 year
FibrMet® Discs PSA Backed	2 years
Flat Edge Filler	2 years
IsoCut® Cutting Fluid	1 year
KonductoMet Powder	1 year
MasterMet® 2	3 years
MasterMet	2 years
MasterPolish®	1 year
MasterPrep	2 years
MetGrip® Liners	1 year
MetaDi® Fluid	2 years
MetaDi® Suspensions & Pastes	2 years
MicroPolish Alumina Suspension & Powder	1 year
PhenoCure® Powder & PreMolds	2 years
Pigments for Castable Mounts	1 year
Planar Grinding Stones	2 years
Polishing Cloths with PSA	1 year
Powdered Mold Release	2 years
ProbeMet® Powder	1 year
Release Agent	1 year
Silicon Carbide Powder	2 years
TransOptic Powder	1 year
UltraPrep® Diamond Lapping Film	1 year
Wafering Blades	1 year

*Warranty depends on Quality Assurance/Lab evaluation on an individual basis

**Shelf life starts when product is shipped

See Terms & Conditions for warranty information