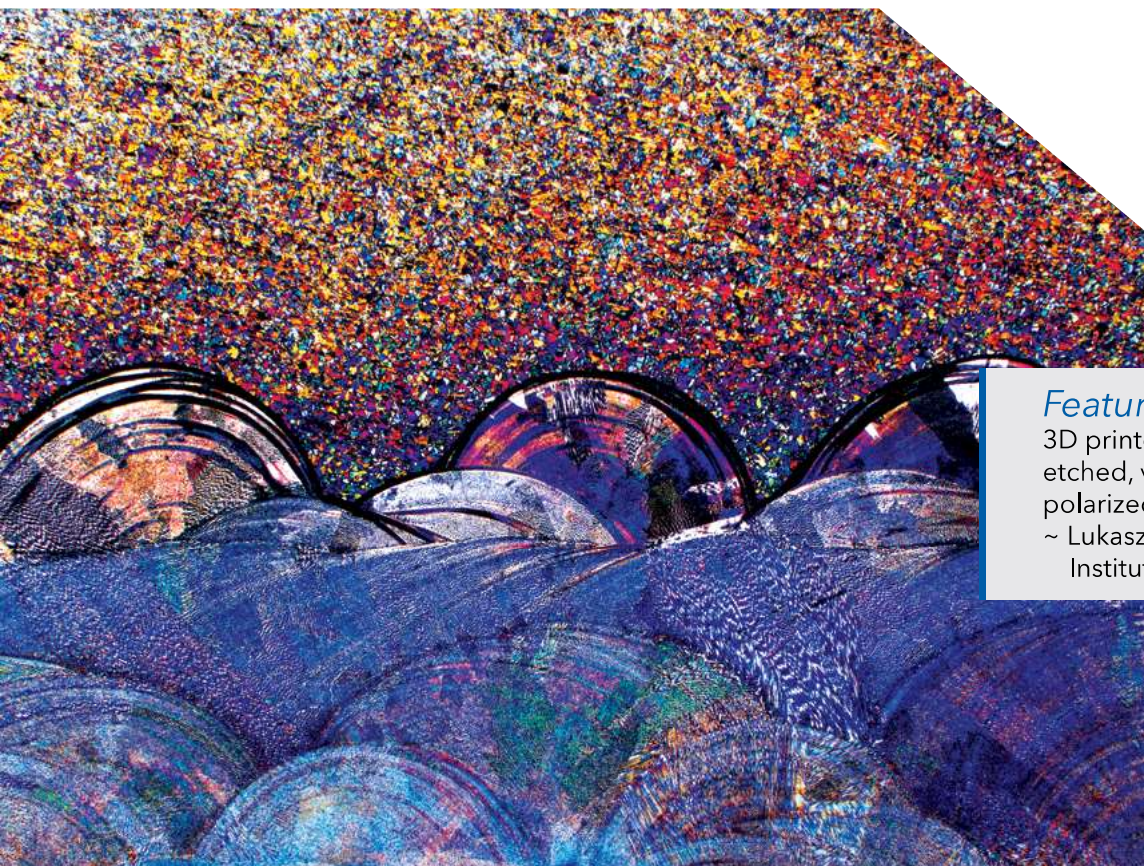


MOUNTING

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





Epoxy Mounting Systems

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 applications with porous samples.

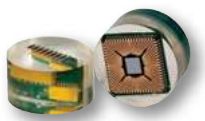
EpoThin™ 2



Protect samples with this gentle low cure temperature epoxy

- Combines low viscosity and low cure temperature
- Provides strong adherence and good pore penetration.
- Recommended for electronic boards and heat sensitive materials

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

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 and/or easy sample removal from mold.

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

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

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



Acrylic Mounting Systems

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™



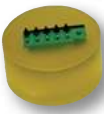
SamplKwick offers quick cure times and excellent wetting characteristics making it ideal for electronics and PWB applications.

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

Ordering Information

Material	Powder		Liquid†		Kit†	
	Part Number	Size	Part Number	Size	Part Number	Size
SamplKwick™	20-3562	1 lb [0.45kg]	20-3564	12oz [0.36L]	20-3560	Powder 1 lb [0.45kg] Liquid 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]	20-3590	Powder 2.2 lbs [1kg] Liquid 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]	11-1037	Powder 2.2 lbs [1kg] Liquid 500mL
	11-1031	22 lbs [10kg]	11-1033	1.3gal [5L]		
VariDur 200	11-1030	2.2 lbs [1kg]	11-1029	16.9oz [500mL]	11-1039	Powder 2.2 lbs [1kg] Liquid 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	20-3530	Powder 1.7 lbs [750g] Liquid 1 8.4oz [250mL] Liquid 2 16.9oz [500mL]
	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

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

Visit www.buehler.com for ordering information.



Vacuum Systems, Consumables & Accessories

SimpliVac™

Our new vacuum system 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.



Vacuum Chamber

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

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

Accessories

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

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

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

Plastic Ring Forms



Provides a stronger fit of the castable mount to the sample holder for polishing in central force mode. (Qty 100)

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

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]



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[†] 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. 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

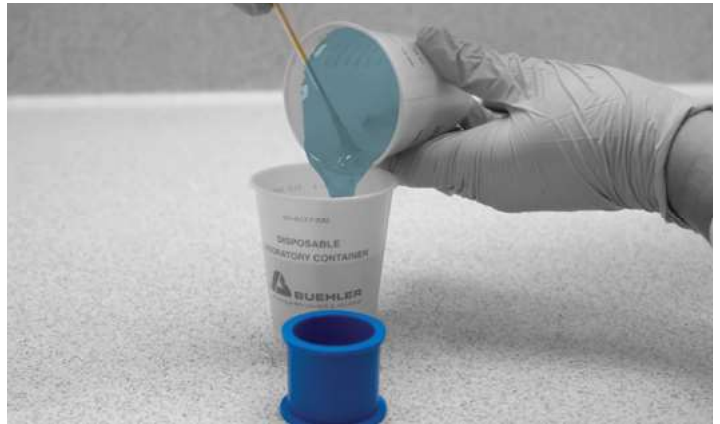


Mounting Tips

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 reduces or eliminates the gap at the sample/epoxy interface, fills pores in the specimen with epoxy and enhances the end result.
- 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