

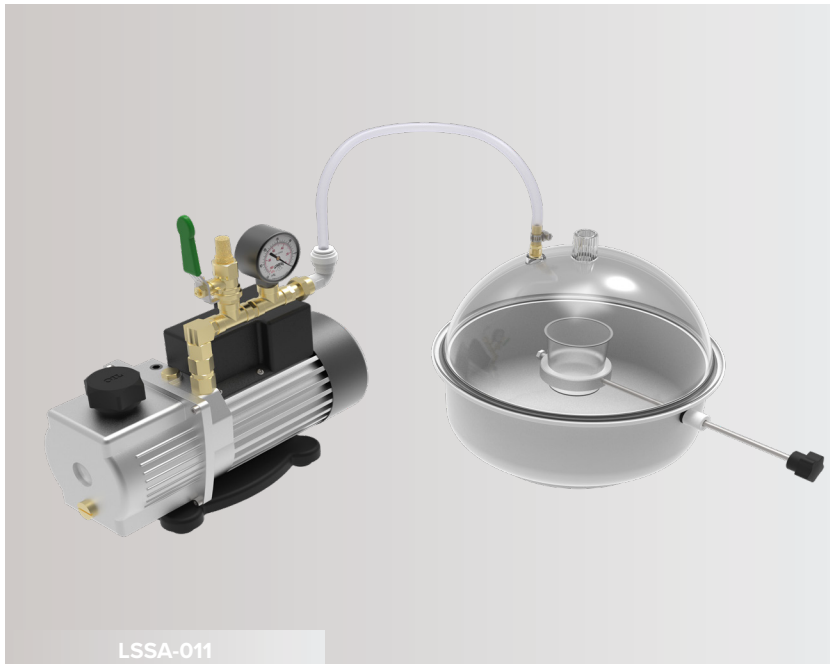


2024-2025

2024-2025 PRODUCT CATALOG

METALLOGRAPHIC EQUIPMENT AND CONSUMABLES

ABRASIVE & PRECISION CUTTING
COMPRESSION & CASTABLE MOUNTING
GRINDING & POLISHING
MICROSCOPY & ANALYSIS
HARDNESS TESTING
LAB FURNITURE



VACUUM CHAMBER LSSA-011

Castable Vacuum Mounting Press

- Pour under vacuum
- Tilting, retractable pouring arm
- Cure at room pressure
- Easy to Use
- Robust and durable design
- Economical

	ACRYLICS	EPOXY	POLYESTER
Type	Acrylic resin and hardener	Epoxy resin and hardener	Polyester resin and hardener
Peak Temperature	150°F (65°C)	100°F-375°F (38-190°C)	100°F (38°C)
Shore-D Hardness	80 (90+ for SUPERMOUNT)	82	76
Cure Time	8-15 minutes	30 minutes for 8 hours	6-8 hours
Comments	Some shrinkage	Moderate hardness, low shrinkage, transparent	Transparent and clear

CASTABLE RESINS	RESIN MIXTURE	PROPERTIES
CASTAMOUNT Acrylic	3-parts powder and 2-parts liquid	Translucent, fast cure
PREMIUM Acrylic	3-parts powder and 2-parts liquid	Translucent, fast cure
ACRYLIC PLUS Acrylic	2-parts powder and 1-part liquid	Semi-clear, fast cure, lower cost
SUPERMOUNT Acrylic	3-parts powder and 2-parts liquid	Grayish/Black, hard, low shrinkage, fast cure
Epoxy - standard Epoxy PLUS	5:1 resin:hardener (wt.) 11:2 resin:hardener (wt.)	Clear to translucent, low shrinkage, 4-8 hour cure
Quick Mount Epoxy	Epoxy (2-liquids) 10:1 resin:hardener (wt.)	Translucent, slightly yellow, 30 minute - 2 hour cure
ULTRATHIN 2 Epoxy ULTRATHIN 2 Epoxy PLUS	10:1 resin:hardener (wt.) 18:5 resin:hardener (wt.)	Clear, low viscosity for porous specimens, 2-6 hour cure
POLYCAST Polyester	Polyester (2-liquids)	Clear and relatively inexpensive

CASTABLE MOUNTING CHAMBER

Castable Metallographic Vacuum Mounting Chamber

2 year warranty
Limited Warranty

FEATURE	LSSA-011 DESCRIPTION
Bell jar	Tilting, retractable pouring arm
Mount sizes	1, 1.25, 1.5 and 2-inch -- 25, 30, 40 and 50 mm
Vacuum	Vacuum pump (sold separately)
Dimensions (WxDxH)	12 x 12 x 12-inch (300 x 300 x 300 mm)
Weight	2.2 lbs (1 kg)
Catalog Number	LSSA-011

Benefits:

- ◆ Able to pull vacuum and pour under vacuum
- ◆ Pour multiple samples
- ◆ High visibility chamber
- ◆ Easy to Use
- ◆ Robust and Durable

DESCRIPTION	110V VACUUM PUMP	220V VACUUM PUMP
Flow Rate	2 CFM (48 liters / minutes)	2 CFM (48 liters / minutes)
Ultimate Vacuum	50 micron	50 micron
Power	0.35 hp	0.35 hp
Inlet Port	1/4" SAE and 1/2" ACME ports	1/4" SAE and 1/2" ACME ports
Dimensions (WxDxH)	5 x 12 x 9.6-inch (130 cm x 310 cm x 240 cm)	5 x 12 x 9.6-inch (130 cm x 310 cm x 240 cm)
Weight	13.7 lbs (6.2 kg)	13.7 lbs (6.2 kg)
Catalog Number	VAC-110	VAC-220

Castable Mounting:

Castable resins are monomer resins which utilize a catalyst or hardener for polymerization. Polymerization results in cross-linking of the polymer to form a relatively hard mount. Castable resins also have the advantage of simultaneously mounting multiple samples at one time for increased throughput. A number of resin systems are used for metallographic mounting, these include:

- ◆ Epoxy (2-part) liquid resins
- ◆ Acrylic (castable) resin powders with a liquid hardener
- ◆ Polyester (clear and can be used for large castings) 2-part liquid resin/hardener



Machinery Directive 2006/42/EC
2014/35/ EU Low Voltage Directive
2014/30/EU Electromagnetic Compatibility Directive

ACRYLIC MOUNTING CONSUMABLES

Acrylic Castable Mounting:

Castable acrylics are easy to use and are very robust. The main advantage of mounting with castable acrylics is the fast curing time. Depending upon the mixing ratio, castable acrylic mounts are typically ready to use within 8-15 minutes. Also unlike epoxy resins, the ratio of the various acrylic parts (powder to liquid) can be altered up to 25% with no adverse effects to the final properties of the mount. This is because both the liquid and powder are acrylics containing various additives and curing agents. By varying the ratio of the liquid to powder, the curing time and viscosity can be altered.



PACE Product Name	Catalog Number	Qty	Price (\$)
CASTAMOUNT Acrylic kit (1 lb resin with 12 oz liquid hardener)	AK-5000-K1	1 lb	65.00
CASTAMOUNT Acrylic kit (5 lbs resin with 1/2 gallon liquid hardener)	AK-5000-K5	5 lbs	270.00
CASTAMOUNT Acrylic Powders			
CASTAMOUNT Acrylic powder (1 lb)	AR-5000-P1	1 lb	55.00
CASTAMOUNT Acrylic powder (5 lbs)	AR-5000-P5	5 lbs	240.00
CASTAMOUNT Acrylic powder (25 lbs)	AR-5000-P25	25 lbs	1075.00
CASTAMOUNT Acrylic powder (100 lbs)	AR-5000-P100	100 lbs	4050.00
CASTAMOUNT Acrylic Liquids			
CASTAMOUNT Acrylic hardener (12 oz)	AH-5000-H12	12 oz	28.50
CASTAMOUNT Acrylic hardener (32 oz)	AH-5000-H32	32 oz	48.50
CASTAMOUNT Acrylic hardener (1/2 gallon)	AH-5000-H64	1/2 gallon	72.50
CASTAMOUNT Acrylic hardener (1 gallon)	AH-5000-H128	1 gallon	115.00
CASTAMOUNT Acrylic hardener (5 gallon)	AH-5000-H640	5 gallon	505.00

TIP: Acrylics

Acrylics can be submerged into a water bath during curing. This reduces the exotherm heat and thus reduces the shrinkage of the mount at the specimen interface. A secondary advantage is that the water also absorbs the odor.

PREMIUM Acrylics (Castable Mounting)

PACE Product Name	Catalog Number	Qty	Price (\$)
PREMIUM Acrylic kit (1 kg resin with 500 ml liquid hardener)	PAR-5000-K1	1 kg	195.00
PREMIUM Acrylic kit (2.5 kg resin with 2 liter liquid hardener)	PAR-5000-K2	2.5 kg	405.00
PREMIUM Acrylic Powders			
PREMIUM Acrylic powder (1 kg)	PAR-5000-P1000	1 kg	170.00
PREMIUM Acrylic powder (2.5 kg)	PAR-5000-P2500	2.5 kg	370.00
PREMIUM Acrylic powder (7.5 kg)	PAR-5000-P7500	7.5 kg	945.00
PREMIUM Acrylic Liquids			
PREMIUM Acrylic hardener (500 ml)	PAH-5000-H500	500 ml	74.00
PREMIUM Acrylic hardener (1 liter)	PAH-5000-H1L	1 liter	135.00
PREMIUM Acrylic hardener (5 liters)	PAH-5000-H5L	5 liter	525.00

ACRYLIC PLUS Acrylics (Castable Mounting)



PACE Product Name	Catalog Number	Qty	Price (\$)
ACRYLIC PLUS Castable Mounting Resin Kit (1 lb resin with 12 oz liquid hardener)	ACYP-5000-K1	1 lb	62.00
ACRYLIC PLUS Castable Mounting Resin Kit (5 lbs resin with 1/2 gallon liquid hardener)	ACYP-5000-K5	5 lbs	245.00
ACRYLIC PLUS Acrylic Powders			
ACRYLIC PLUS Resin powder (1 lb)	ACYP-5000-P1	1 lb	55.00
ACRYLIC PLUS Resin powder (5 lbs)	ACYP-5000-P5	5 lbs	235.00
ACRYLIC PLUS Resin powder (25 lbs)	ACYP-5000-P25	25 lbs	1105.00
ACRYLIC PLUS Resin powder (100 lbs)	ACYP-5000-P100	100 lbs	2285.00
ACRYLIC PLUS Acrylic Liquids			
ACRYLIC PLUS Resin hardener (12 oz)	ACYP-5000-H12	12 oz	28.50
ACRYLIC PLUS Resin hardener (32 oz)	ACYP-5000-H32	32 oz	48.50
ACRYLIC PLUS Resin hardener (1/2 gallon)	ACYP-5000-H64	1/2 gallon	72.50
ACRYLIC PLUS Resin hardener (1 gallon)	ACYP-5000-H128	1 gallon	115.00
ACRYLIC PLUS Resin hardener (5 gallon)	ACYP-5000-H640	5 gallon	505.00

SUPERMOUNT Glass Filled Acrylics (Castable Mounting)



PACE Product Name	Catalog Number	Qty	Price (\$)
SUPERMOUNT Glass Filled Acrylic Kit (gray) (1 lb resin with 12 oz liquid hardener)	GKAK-5000-K1	1 lb	72.50
SUPERMOUNT Glass Filled Acrylic Kit (gray) (5 lbs resin with 1/2 gallon liquid hardener)	GKAK-5000-K5	5 lbs	290.00
SUPERMOUNT PLUS Acrylic Powders			
SUPERMOUNT Resin powder (1 lb)	GRAR-5000-P1	1 lb	62.00
SUPERMOUNT Resin powder (5 lbs)	GRAR-5000-P5	5 lbs	265.00
SUPERMOUNT Resin powder (25 lbs)	GRAR-5000-P25	25 lbs	1225.00
SUPERMOUNT Resin powder (100 lbs)	GRAR-5000-P100	100 lbs	4095.00
SUPERMOUNT Acrylic Liquids			
SUPERMOUNT Resin hardener (12 oz)	GRAH-5000-H12	12 oz	28.50
SUPERMOUNT Resin hardener (32 oz)	GRAH-5000-H32	32 oz	48.50
SUPERMOUNT Resin hardener (1/2 gallon)	GRAH-5000-H64	1/2 gallon	72.50
SUPERMOUNT Resin hardener (1 gallon)	GRAH-5000-H128	1 gallon	115.00
SUPERMOUNT Resin hardener (5 gallon)	GRAH-5000-H640	5 gallon	505.00

EPOXY MOUNTING CONSUMABLES

Epoxy Castable Mounting:

The most common and best performing castable resins are epoxy based. Epoxy resins are typically two-part liquid systems consisting of a resin and hardener. Mixing ratios vary depending upon the volume of the mixture or the mount size. Larger mounts require a ratio of less hardener to resin. The advantages of mounting with epoxy resins include:

- ◆ Low shrinkage
- ◆ Relatively clear
- ◆ Relatively low exotherm
- ◆ Excellent adhesion
- ◆ Excellent chemical resistance
- ◆ Good hardness
- ◆ Relatively inexpensive

Epoxy Curing Characteristics:

- ◆ Epoxy curing times are dependent upon a number of variables including:
- ◆ Volume of mounting resin (larger mounts cure faster)
- ◆ Thermal mass of specimen (larger specimens absorb heat and therefore require longer curing times)
- ◆ Specimen material properties
- ◆ Initial resin temperature (higher resin temperatures cure faster)
- ◆ Ambient temperature (higher room temperatures cure faster)
- ◆ Relative humidity and shelf life (absorption of water degrades resin and shortens shelf life)
- ◆ Mounting mold (plastic and rubber molds absorb heat differently)

Epoxy Standard Cure (5:2 Resin: Hardener) Castable Mounting



PACE Product Name	Catalog Number	Qty	Price (\$)
Standard Epoxy Resin			
Epoxy castable resin (32 oz)	EP-3000-32	32 oz	44.50
Epoxy castable resin (1-gallon)	EP-3000-128	1 gallon	132.00
Epoxy castable resin (5-gallons)	EP-3000-5G	5 gallons	605.00
Standard Epoxy Hardeners			
Epoxy hardener (8 oz)	EH-3000-08	8 oz	27.50
Epoxy hardener (32 oz)	EH-3000-32	32 oz	55.00
Epoxy hardener (1 gallon)	EH-3000-128	1 gallon	235.00

Epoxy PLUS Standard Cure (11:2 Resin: Hardener) Castable Mounting

PACE Product Name	Catalog Number	Qty	Price (\$)
EPOXY PLUS Resin			
Epoxy castable resin (32 oz)	EP-3000-32P	32 oz	44.50
Epoxy castable resin (1-gallon)	EP-3000-128P	1 gallon	132.00
Epoxy castable resin (5-gallons)	EP-3000-5GP	5 gallons	605.00
EPOXY PLUS Hardeners			
Epoxy hardener (8 oz)	EH-3000-08P	8 oz	38.00
Epoxy hardener (32 oz)	EH-3000-32P	32 oz	112.00
Epoxy hardener (1 gallon)	EH-3000-128P	1 gallon	410.00

Fast Curing Quick Mounting Epoxy (10:1 Resin: Hardener) Castable Mounting



PACE Product Name	Catalog Number	Qty	Price (\$)
Quick Mounting Epoxy Resins			
Quick Mounting fast epoxy castable resin (32 oz)	ERF-3000-32	32 oz	63.00
Quick Mounting fast epoxy castable resin (1-gallon)	ERF-3000-128	1 gallon	178.50
Quick Mounting fast epoxy castable resin (5-gallons)	ERF-3000-5G	5 gallons	795.00
Quick Mounting Epoxy Hardeners			
Quick Mounting fast epoxy hardener (8 oz)	EHF-3000-08	8 oz	42.00
Quick Mounting fast epoxy hardener (32 oz)	EHF-3000-32	32 oz	128.00
Quick Mounting fast epoxy hardener (1 gallon)	EHF-3000-128	1 gallon	450.00

Low Viscosity ULTRATHIN 2 Epoxy (10:1 Resin: Hardener) Castable Mounting



PACE Product Name	Catalog Number	Qty	Price (\$)
ULTRATHIN 2 Low Viscosity Epoxy Resins			
Low Viscosity castable epoxy resin (32 oz)	ULTRA-3000R-32	32 oz	78.00
Low Viscosity castable epoxy resin (1-gallon)	ULTRA-3000R-128	1 gallon	190.00
Low Viscosity castable epoxy resin (5-gallons)	ULTRA-3000R-5G	5 gallons	945.00
ULTRATHIN 2 Low Viscosity Epoxy Hardeners			
Low Viscosity castable epoxy hardener (8 oz)	ULTRA-3000H-08	8 oz	42.00
Low Viscosity castable epoxy hardener (32 oz)	ULTRA-3000H-32	32 oz	128.00
Low Viscosity castable epoxy hardener (1 gallon)	ULTRA-3000H-128	1 gallon	450.00

Low Viscosity ULTRATHIN 2 PLUS Epoxy (18:5 Resin: Hardener) Castable Mounting

PACE Product Name	Catalog Number	Qty	Price (\$)
ULTRATHIN 2 PLUS Low Viscosity Epoxy Resins			
Low Viscosity castable epoxy resin (32 oz)	ULTRA-3000R-32P	32 oz	78.00
Low Viscosity castable epoxy resin (1-gallon)	ULTRA-3000R-128P	1 gallon	215.00
Low Viscosity castable epoxy resin (5-gallons)	ULTRA-3000R-5GP	5 gallons	945.00
ULTRATHIN 2 PLUS Low Viscosity Epoxy Hardeners			
Low Viscosity castable epoxy hardener (8 oz)	ULTRA-3000H-08P	8 oz	42.00
Low Viscosity castable epoxy hardener (32 oz)	ULTRA-3000H-32P	32 oz	128.00
Low Viscosity castable epoxy hardener (1 gallon)	ULTRA-3000H-128P	1 gallon	450.00

TIP: Epoxies

- ◆ Preheat resin and sample to 35°C (95°F) to expedite the initial heating process and for decreasing overall curing time

POLYESTER MOUNTING CONSUMABLES

Polyester Castable Mounting:

Polyesters are typically used when a very clear mount is required. Polyester resins are also useful for mounting parts for display. In this case, the part appears suspended in the plastic. The procedure for molding samples to be displayed is to first determine the mixing ratio of the resin to hardener (catalyst). This ratio is variable depending upon the mass of the casting. The table to the right for Polyester catalyst mixing ratio's is based on ambient and resin temperatures of 70°F

For larger volumes, the amount of hardener needs to be reduced significantly. The procedure for suspending the sample in the mount is to pour an initial layer and allow it to pot or gel (do not let it fully cure). The object or specimen is then placed on the "rubbery" polyester layer and another layer of the liquid polyester is poured. Multiple layers can be poured in this fashion if required.

Single Layer Casting (metallographic)		Multiple Layer Casting (display)	
Layer Thickness (inches)	Drops of catalyst per ounce of resin	Layer	Drops of catalyst per ounce of resin
1/8	15	1st layer	4-5
1/4	8	2nd layer	3-4
1/2	6	3rd layer	2-3
3/4	5	4th layer	1-2
1-1.5	4	5th layer or more	1

Polyester Characteristics:

- ◆ Very clear (water clear)
- ◆ High odor
- ◆ Best resin system for making large casting

Polyester Resin (Clear Castable Mounting)



PACE Product Name	Catalog Number	Qty	Price (\$)
Clear Polyester castable resin (1 gallon)	POLYCAST-128	1 gallon	125.00
Polyester Hardener (2 oz)	POLYHARD-02	2 oz	11.00
Polyester Color Dye Set (3 colors)	DYE-1000	3 colors	40.50

TIP: Polyesters

Polyesters can be submerged into a water bath during curing. This reduces the exotherm heat and thus reduces the shrinkage of the mount at the specimen interface. A secondary advantage is that the water also absorbs the odor.

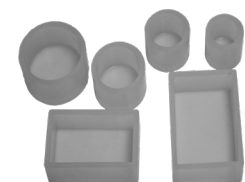
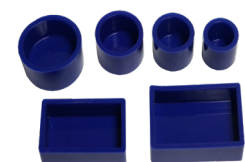
CASTABLE MOLDS & ACCESSORIES

Castable Mounting Molds

PACE Product Name	Catalog Number	Qty	Price (\$)
Reusable Plastic Molds			
1.0-inch reusable two piece plastic mold (12/pkg)	METPREP-0100	12/pkg	31.00
1.25-inch reusable two piece plastic mold (12/pkg)	METPREP-0125	12/pkg	32.50
1.5-inch reusable two piece plastic mold (12/pkg)	METPREP-0150	12/pkg	42.50
2.0-inch reusable two piece plastic mold (12/pkg)	METPREP-0200	12/pkg	58.50
Disposable Plastic Molds			
1.0-inch disposable red mount cap - 50/pkg	MOUNT-0100	50/pkg	27.50
1.25-inch disposable red mount cap - 50/pkg	MOUNT-0125	50/pkg	28.50
1.5-inch disposable red mount cap - 50/pkg	MOUNT-0150	50/pkg	29.50



PACE Product Name	Catalog Number		Qty	Price (\$)
Silicon Rubber Molds	Blue Molds	Clear Molds		
1.0-inch diameter Silicone Rubber Molds - 3/pkg	RMOUNT-0100	RMOUNT-0100C	3/pkg	31.00
1.25-inch diameter Silicone Rubber Molds - 3/pkg	RMOUNT-0125	RMOUNT-0125C	3/pkg	37.50
1.5-inch diameter Silicone Rubber Molds - 3/pkg	RMOUNT-0150	RMOUNT-0150C	3/pkg	48.50
2.0-inch diameter Silicone Rubber Molds - 3/pkg	RMOUNT-0200	RMOUNT-0200C	3/pkg	55.00
2.75 x 1-1/2 x 7/8-inch (70 x 39 x 22 mm) Silicone Rubber Molds	RMOUNT-315R	RMOUNT-315C	each	17.50
3 x 2 x 7/8-inch (76 x 51 x 22 mm) Silicone Rubber Molds	RMOUNT-302R	RMOUNT-302C	each	19.50



Castable Mounting Accessories



PACE Product Name	Catalog Number	Qty	Price (\$)
1-gallon castable pump dispenser	ED-3000-01	each	17.50
1.25-inch specimen storage container - 25/pkg	STORE-0125	25/pkg	42.00
Mold release (8 oz)	MR-1000-08	each	19.50
Mold release (16 oz)	MR-1000-16	each	29.50
Mixing Cups			
3 oz Graduated Paper Mixing cups (100/pkg)	MCUPS-0100	100/pkg	15.25
9 oz Plastic Mixing cups (50/pkg)	PCUPS-050	50/pkg	7.75
Vacuum Impregnator Pouring cups (50/pkg)	POUR-CUP-050	50/pkg	52.00
Mounting Klips			
Metal MKLIP Spring mounting clip (100/pkg)	MKLIP-0100	100/pkg	70.50
Plastic SKLIP Spring mounting clip (100/pkg)	SKLIP-0100	100/pkg	39.00
Plastic KLIP specimen mounting clip (100/pkg)	KLIP-0100	100/pkg	42.00
Plastic MULTIKLIP specimen clips (100/pkg)	MULTIKLIP-0100	100/pkg	55.50
Plastic UNIKLIP specimen clips (100/pkg)	UNIKLIP-0100	100/pkg	35.00
Disposable Gloves			
Small Nitrile Gloves (100/box)	GLOVES-S100	100/pkg	25.00
Medium Nitrile Gloves (100/box)	GLOVES-M100	100/pkg	25.00
Large Nitrile Gloves (100/box)	GLOVES-L100	100/pkg	25.00