

Mounting



Mounting serves several different purposes:

- Protection/support of the sample surface
- Easier handling
- Having several small samples in one mount
- Having uniform sizes for clamping in sample holders

There are two different mounting methods; Cold and Hot Mounting; and several resins available that each have different strengths and advantages.



Cold Mounting

Cold mounting resins typically consist of two components that cure after being mixed together. Two different systems are available, epoxies and acrylics.

The epoxies consist of a liquid resin and a liquid hardener.

Our epoxy resin can be mixed with either the Aka-Cure Slow or Aka-Cure Quick hardener, depending on the requirements. Both have very good adhesion to the sample, which helps to provide the best possible edge retention. They can also be used for vacuum impregnation of fragile and porous samples like ceramics and plasma spray coatings.

We offer epoxy resin and hardeners separate, not as a kit, to make it easy to use either hardener with the resin.

Epoxies require good precision when mixing the two components. It can be measured by volume, but weighing is much more precise and the recommended method.

Our acrylic resin consists of a powder and a liquid.

Aka-Clear-2 is a fast curing, transparent system with a slightly yellowish tint. It cures in 8 minutes and produces totally clear, bubble-free mounts without having to use a pressure pot.

Mixing of the 2 components is not critical, if a thinner mix is required, a little extra liquid can be added without adverse effect on the cured mounts.

With Aka-Clear powder we ship 2 measuring spoons, 2 reusable mixing cups and 25 wooden mixing pins for easy measuring and mixing of the resin. With the Aka-Resin Epoxy we ship the same, except the measuring spoons, as the epoxy resin and hardener should be measured by weight and not by volume.

	Cold Mounting		
Type	Epoxy		Acrylic
Component 1	Aka-Resin Liquid Epoxy		Aka-Clear-2 Powder
Component 2	Aka-Cure, Slow	Aka-Cure, Quick	Aka-Clear-2 Liquid
Mixing ratio by weight	100 g of resin : 12 g of Aka-Cure, Slow	100 g of resin : 26.3 g of Aka-Cure, Quick	10 g of powder : 6.3 g of liquid
Mixing ratio by volume	100 parts of resin : 13.5 parts of Aka-Cure, Slow	100 parts of resin : 30 parts of Aka-Cure, Quick	2 parts of powder : 1 part of liquid
Curing time	8-24 hours @ 22°C Long pot life and low peak temperature, suitable for both vacuum impregnation and mounting of heat sensitive samples. Not suitable for large mounts due to excessive exothermal reaction.	30 min. when heated to 80°C. Peak temperatures up to 200°C. For very hard, transparent mounts. Very large mounts can be made using a 2 cycle curing schedule. First the mount is cured without heating in 8 hours, followed by a 1 h cycle @ 100°C.	8 -10 minutes @ 22°C Peak temperature 90°C
Shrinkage, 1-5, 1 = best/lowest	1	2	3
Recommended applications	Transparent, very low curing temperature, no shrinkage, for sensitive materials. Vacuum impregnation	Transparent, very fast epoxy system, for vacuum impregnation of porous samples	Completely clear for easy visibility of sample, mounting of electronic components, failure analysis



Aka-Resin Liquid Low viscosity clear liquid epoxy resin

Product no.	Product name	Contents	GRWT kg
25101115	Aka-Resin Liquid Epoxy	1 l	1,22
25101117	Aka-Resin Liquid Epoxy	5 l	5,71



Aka-Cure Slow 8 - 24 hours cure @20°C

Product no.	Product name	Contents	GRWT kg
25101211	Aka-Cure Slow	250 ml 	0,28

Aka-Cure Quick 30 min. cure when heating to @80°C

Product no.	Product name	Contents	GRWT kg
25101223	Aka-Cure Quick	500 ml 	0,55

Aka-Clear 8 min. cure clear mounts

Product no.	Product name	Contents	GRWT kg
25202311	Aka-Clear-2 Powder	1 kg	1,13
25202313	Aka-Clear-2 Powder	5 kg	5,20
25202315	Aka-Clear-2 Powder	10 kg	11,86
25202413	Aka-Clear-2 Liquid	500 ml 	0,81
25202416	Aka-Clear-2 Liquid	2,5 l 	2,40

Hot Mounting



Hot mounting resins are single compounds for use in mounting presses.

- Aka-Resin, Epoxy is a black mineral filled thermosetting compound for perfect mounts with very low shrinkage and best edge retention.
- Aka-Resin, Acrylic is a thermoplastic compound for crystal clear mounts for easy visibility of the sample.
- Aka-Resin, Melamine is a white mineral filled thermosetting compound for universal mounting with low shrinkage. White color gives perfect contrast in hardness testing.
- Aka-Resin, Phenolic SEM is a black carbon filled thermosetting compound for conductive mounting used in SEM work.
- Aka-Resin, Phenolic is a black wood filled thermosetting compound for backfilling and mounting of routine samples.

Hot Mounting					
Type	Epoxy	Acrylic	Melamine	Phenolic	
Name	Aka-Resin Epoxy	Aka-Resin Acrylic	Aka-Resin Melamine	Aka-Resin Phenolic SEM	Aka-Resin Phenolic
Shrinkage, 1-5, 1 = best/lowest	2	4	3	3	4
Recommended applications	With hard mineral filler for best edge retention	Completely clear for easy visibility of sample	With mineral filler, good all-round resin, perfect contrast for micro-hardness testing	Conductive, for use in SEM	Low price, for routine mounting and back-filling



Epoxy		Black mineral filled best edge retention	
Product no.	Product name	Contents	GRWT kg
21101521	Aka-Resin Epoxy	1 kg	1,12
21101524	Aka-Resin Epoxy	7,5 kg	8,10

Acrylic		Clear thermoplastic resin	
Product no.	Product name	Contents	GRWT kg
21201001	Aka-Resin Acrylic	1 kg	1,10
21201004	Aka-Resin Acrylic	7,5 kg	7,97

Melamine		White mineral filled good all round resin	
Product no.	Product name	Contents	GRWT kg
21301511	Aka-Resin Melamine	1 kg	1,12
21301514	Aka-Resin Melamine	7,5 kg	7,90

Phenolic		Black wood filled best economy	
Product no.	Product name	Contents	GRWT kg
21501122	Aka-Resin Phenolic	2,5 kg	2,74
21501124	Aka-Resin Phenolic	7,5 kg	8,30

Phenolic SEM		Black graphite filled conductive for SEM work	
Product no.	Product name	Contents	GRWT kg
21501721	Aka-Resin Phenolic SEM	1 kg	1,12
21501724	Aka-Resin Phenolic SEM	7,5 kg	8,30

Accessories for mounting



Here you find a range of accessories for Cold and Hot Mounting.

Moulds for all types of cold mounting resins. With built-in bevel to avoid ripping cloths or grinding paper while preparing samples. The moulds are available in sizes from 25 – 50 mm dia..

Mounting clips in stainless steel and in plastic for easy placement of samples while curing. The stainless steel springs are used for holding individual samples, and the plastic clips can hold up to three samples. The plastic clips are standing on thin legs to minimize the contact of the softer plastic with the sample in the level of preparation. This reduces the risk of contamination and edge rounding.

Mould release products **Aka-NoStick** for both cold and hot mounting. For cold mounting Aka-NoStick Liquid is used to coat the inside of the moulds, and for hot mounting, Aka-NoStick powder is applied on the upper and lower ram of the mounting press to prevent the resin from sticking.



Moulds		Mounting cups for all Cold Mounting Resins	
Product no.	Product name	Contents	GRWT kg
73112510	Aka-Mould 25 mm dia.	10 pcs.	0,19
73113010	Aka-Mould 30 mm dia.	10 pcs.	0,21
73114010	Aka-Mould 40 mm dia.	10 pcs.	0,28
73115010	Aka-Mould 50 mm dia.	10 pcs.	0,37

Clips		Clips for holding samples in place	
Product no.	Product name	Contents	GRWT kg
73210860	Aka-Clip Stainless Steel	100 pcs.	0,05
73222060	Aka-TrioClip Black	100 pcs.	0,11
73222090	Aka-TrioClip Black	1000 pcs.	1,10

Caps		For specimen protection	
Product no.	Product name	Contents	GRWT kg
78313060	NEW Protection Cap 30 mm dia.	100 pcs.	0,22
78314060	NEW Protection Cap 40 mm dia.	100 pcs.	0,32
78315060	NEW Protection Cap 50 mm dia.	100 pcs.	0,47

NoStick		Release agent for hot or cold mounting	
Product no.	Product name	Contents	GRWT kg
21901105	Aka-NoStick - Mould release powder	50 g	0,13
25901201	Aka-NoStick Liquid - Mould release agent	250 ml	0,32