

Akasel

Consumables for metallography

2017



A SMARTER ALTERNATIVE

MADE IN DENMARK

AKASEL 

AKASEL.COM

Table of Contents

Product	Page
Demo Kit	3 - 6
Cutting	7
Cutting - Cut-off wheels	8
Cutting - Additives for recirculation cooling units	9 - 10
Mounting	11
Mounting - Cold Mounting	11 - 13
Mounting - Hot Mounting	14 - 15
Mounting - Accessories	16 - 17
Grinding	18 - 21
Grinding - Aka-Piatto	22 - 23
Grinding - Aka-Piatto+	24 - 25
Grinding - Aka-Allegran/Largan	26 - 27
Grinding - Rhaco Grit	28 - 32
Grinding - Grinding Stones	33 - 34
Polishing	35
Polishing - Polishing Cloths	36 - 40
Polishing - Diamond Products	41 - 42
Polishing - DiaMaxx	43 - 45
Polishing - DiaDoublo	46 - 48
Polishing - DiaDoublo Water-free	49 - 50
Polishing - Aka-Poly and Aka-Mono	51 - 53
Polishing - Aka-Poly+ and Aka-Mono+	54 - 55
Polishing - Aka-Poly Water-free	56 - 57
Polishing - Diamond Spray	58 - 59
Polishing - Diamond Stick	60 - 61
Polishing - Diamond Paste	62 - 63
Polishing - Oxide Polishing Suspensions	64 - 65
Polishing - Lubricants	66 - 68
Magnetic Adaptation	69 - 72
Accessories	73 - 74

NEW New product



Hazardous goods. Extra charges for packing and documentation apply for airfreight. Please inquire before placing your order.

Demo Kit



The Akasel Demo Kit is a unique way for testing the latest in metallographic sample preparation.

We have created 16 different Demo Kits for the preparation of either specific materials or material groups.

The preparation methods for material groups are all based on fast 3-step methods that provide very good results in short times.

A Demo Kit contains all necessary consumables, user guides and brochures for grinding and polishing and will allow you to prepare 50 samples or more.

The included grinding discs Aka-Piatto, Aka-Allegran or Aka-Largan can at least replace 100 to 200 pcs of grinding paper and such last much longer.

It also contains the Aka-Brief, a detailed overview of the preparation method with pictures of the sample after each preparation step, and comprehensive tips and tricks.

With a Demo Kit you will be able to test the Akasel way of sample preparation at your convenience.



Demo Kit		ø200 mm		
Product no.		Product name	Contents	GRWT kg
10301	NEW	Demo Kit for preparation of Brass, ø200 mm	1 pc.	1,00
10302	NEW	Demo Kit for preparation of Ceramic Capacitors, ø200 mm	1 pc.	1,00
10303	NEW	Demo Kit for preparation of Titanium Alloys, ø200 mm	1 pc.	1,00
10304	NEW	Demo Kit for preparation of Aluminium Alloys, ø200 mm	1 pc.	1,00
10305	NEW	Demo Kit for preparation of Plasma Spray Coated Parts, ø200 mm	1 pc.	1,00
10306	NEW	Demo Kit for preparation of Coated Sintered Carbides, ø200 mm	1 pc.	1,00
10307	NEW	Demo Kit for preparation of Titanium Fasteners, ø200 mm	1 pc.	1,00
10308	NEW	Demo Kit for preparation of Stainless and Duplex Steel, ø200 mm	1 pc.	1,00
10309	NEW	Demo Kit for preparation of Carbon Composites, ø200 mm	1 pc.	1,00
10310	NEW	Demo Kit for preparation of Soft Material 50-150 HV in 3 steps, ø200 mm	1 pc.	1,00
10311	NEW	Demo Kit for preparation of Medium Soft Material 150-450 HV in 3 steps, ø200 mm	1 pc.	1,00
10312	NEW	Demo Kit for preparation of Hard Material 700-2000 HV in 3 steps, ø200 mm	1 pc.	1,00
10313	NEW	Demo Kit for preparation of Electronic Parts, ø200 mm	1 pc.	1,00
10314	NEW	Demo Kit for preparation of Nodular Cast Iron, ø200 mm	1 pc.	1,00
10315	NEW	Demo Kit for preparation of Zinc Coated Steel, ø200 mm	1 pc.	1,00
10316	NEW	Demo Kit for preparation of Medium Hard Material 400-700 HV in 3 steps, ø200 mm	1 pc.	1,00

Demo Kit		ø250 mm		
Product no.		Product name	Contents	GRWT kg
10331	NEW	Demo Kit for preparation of Brass, ø250 mm	1 pc.	1,00
10332	NEW	Demo Kit for preparation of Ceramic Capacitors, ø250 mm	1 pc.	1,00
10333	NEW	Demo Kit for preparation of Titanium Alloys, ø250 mm	1 pc.	1,00
10334	NEW	Demo Kit for preparation of Aluminium Alloys, ø250 mm	1 pc.	1,00

Demo Kit		ø250 mm		
Product no.		Product name	Contents	GRWT kg
10335	NEW	Demo Kit for preparation of Plasma Spray Coated Parts, ø250 mm	1 pc.	1,00
10336	NEW	Demo Kit for preparation of Coated Sintered Carbides, ø250 mm	1 pc.	1,00
10337	NEW	Demo Kit for preparation of Titanium Fasteners, ø250 mm	1 pc.	1,00
10338	NEW	Demo Kit for preparation of Stainless and Duplex Steel, ø250 mm	1 pc.	1,00
10339	NEW	Demo Kit for preparation of Carbon Composites, ø250 mm	1 pc.	1,00
10340	NEW	Demo Kit for preparation of Soft Material 50-150 HV in 3 steps, ø250 mm	1 pc.	1,00
10341	NEW	Demo Kit for preparation of Medium Soft Material 150-450 HV in 3 steps, ø250 mm	1 pc.	1,00
10342	NEW	Demo Kit for preparation of Hard Material 700-2000 HV in 3 steps, ø250 mm	1 pc.	1,00
10343	NEW	Demo Kit for preparation of Electronic Parts, ø250 mm	1 pc.	1,00
10344	NEW	Demo Kit for preparation of Nodular Cast Iron, ø250 mm	1 pc.	1,00
10345	NEW	Demo Kit for preparation of Zinc Coated Steel, ø250 mm	1 pc.	1,00
10346	NEW	Demo Kit for preparation of Medium Hard Material 400-700 HV in 3 steps, ø250 mm	1 pc.	1,00

Demo Kit		ø300 mm		
Product no.		Product name	Contents	GRWT kg
10361	NEW	Demo Kit for preparation of Brass, ø300 mm	1 pc.	1,00
10362	NEW	Demo Kit for preparation of Ceramic Capacitors, ø300 mm	1 pc.	1,00
10363	NEW	Demo Kit for preparation of Titanium Alloys, ø300 mm	1 pc.	1,00
10364	NEW	Demo Kit for preparation of Aluminium Alloys, ø300 mm	1 pc.	1,00
10365	NEW	Demo Kit for preparation of Plasma Spray Coated Parts, ø300 mm	1 pc.	1,00
10366	NEW	Demo Kit for preparation of Coated Sintered Carbides, ø300 mm	1 pc.	1,00
10367	NEW	Demo Kit for preparation of Titanium Fasteners, ø300 mm	1 pc.	1,00
10368	NEW	Demo Kit for preparation of Stainless and Duplex Steel, ø300 mm	1 pc.	1,00

Demo Kit		ø300 mm		
Product no.		Product name	Contents	GRWT kg
10369	NEW	Demo Kit for preparation of Carbon Composites, ø300 mm	1 pc.	1,00
10370	NEW	Demo Kit for preparation of Soft Material 50-150 HV in 3 steps, ø300 mm	1 pc.	1,00
10371	NEW	Demo Kit for preparation of Medium Soft Material 150-450 HV in 3 steps, ø300 mm	1 pc.	1,00
10372	NEW	Demo Kit for preparation of Hard Material 700-2000 HV in 3 steps, ø300 mm	1 pc.	1,00
10373	NEW	Demo Kit for preparation of Electronic Parts, ø300 mm	1 pc.	1,00
10374	NEW	Demo Kit for preparation of Nodular Cast Iron, ø300 mm	1 pc.	1,00
10375	NEW	Demo Kit for preparation of Zinc Coated Steel, ø300 mm	1 pc.	1,00
10376	NEW	Demo Kit for preparation of Medium Hard Material 400-700 HV in 3 steps, ø300 mm	1 pc.	1,00

Cutting

Cut-off wheels



Metallographic cutting is the first and very important step in sample preparation.

To take out representative samples from a large workpiece or to make longitudinal or cross sections of smaller parts, it must be ensured that the samples are removed without the creation of heat that could modify or even damage the structure.

The surface of the sample after cutting must be free from thermal damage and with a minimum of mechanical deformation. Otherwise the following preparation steps will take very long time, and there is a risk that possible changes to the microstructure are not removed and may be seen as the "real" structure.

Our wheels are, in respect of the above, optimised especially for metallographic cutting to provide perfect results in the shortest possible time.

For precision cutting we offer a range of cut-off wheels in 150 mm dia. They are only 0.5 mm thick for fast cutting of different materials.

		Precision cut-off wheels			
		Aka-Cut 500 HV	Aka-Cut 1000 HV	Aka-Cut 700 HV	Aka-Cut 400 HV / NF
H a r d n e s s	2000 HV				
	1500 HV				
	1000 HV				
	700 HV				
	500 HV				
	350 HV				
	250 HV				
	200 HV				
	150 HV				
	100 HV				
	50 HV				
D i a m e t e r	150 mm / 6" dia.	÷	9456	9457	9458
	254 mm / 10" dia.	9133	÷	÷	÷
	305 mm / 12" dia.	9153	÷	÷	÷
	354 mm / 14" dia.	9183	÷	÷	÷
	406 mm / 16" dia.	9203	÷	÷	÷

150 mm Precision cut

Product no.	Product name	Contents	GRWT kg
9456	Aka-Cut 1000 HV Cut-off wheel, 150 x 0.5 x 12.7 mm	5 pc.	0,33
9457	Aka-Cut 700 HV Cut-off wheel, 150 x 0.5 x 12.7 mm	5 pc.	0,33
9459	NEW Aka-Cut 400 HV NF Cut-off wheel, 150 x 0.5 x 12.7 mm	5 pc.	0,33

250 mm

Product no.	Product name	Contents	GRWT kg
9133	Aka-Cut 500 HV Cut-off wheel, 254 x 1.7 x 32 mm	10 pc.	2,02

300 mm

Product no.	Product name	Contents	GRWT kg
9153	Aka-Cut 500 HV Cut-off wheel, 305 x 2.2 x 32 mm	10 pc.	3,24

350 mm

Product no.	Product name	Contents	GRWT kg
9183	Aka-Cut 500 HV Cut-off wheel, 354 x 2.6 x 32 mm	10 pc.	5,91

400 mm

Product no.	Product name	Contents	GRWT kg
9203	Aka-Cut 500 HV Cut-off wheel, 406 x 3.2 x 32 mm	10 pc.	8,91

Additives for recirculation units



Together with Aka-Cool, the additive for the recirculation cooling unit, the Aka-Cut cut-off wheels will perform at their very best. Aka-Cool improves the cooling and lubricating ability of the water and acts as corrosion protection for both cut-off machine and sample material.

Aka-Cool is free from amine and boric acid, common in many other machine coolants. The absence of amines gives optimum skin compatibility with a pH of the mixed cooling fluid between 7 – 8, and an extremely low allergy potential.

The recommended mixing ratio of Aka-Cool in water is 3 – 5 %.

Aka-Cool guarantees a very long service life of the coolant and a safe and economical process flow.

Both in regards of cost and personal safety Aka-Cool is the optimal choice.

When (excessive) foaming of the cooling water occurs, Aka-NoFoam offers the solution. Any formation of foam drastically reduces cooling of the samples during cutting and can result in thermal damage.

Aka-NoFoam eliminates foam and thus increases the cooling ability of the cooling water.

The recommended mixing ratio of Aka-NoFoam in the cooling fluid is 0.5 – 1 %.



Aka-Cool		Concentrate for recirculation units	
Product no.	Product name	Contents	GRWT kg
9610	Aka-Cool	1 l	1,00
9620	Aka-Cool	5 l	4,90

Aka-NoFoam		Foam reducing additive	
Product no.	Product name	Contents	GRWT kg
9650	NEW Aka-NoFoam	500 ml	0,62

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 @ 20°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 minutes @ 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
8510	Aka-Resin Liquid Epoxy	1 l	1,22
8520	Aka-Resin Liquid Epoxy	5 l	5,71



Aka-Cure Slow 8 - 24 hours cure @20°C

Product no.	Product name	Contents	GRWT kg
8560	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
8591	Aka-Cure, Quick	500 ml 	0,55

Aka-Clear 8 min. Cure @90°C clear embeddings with pressure pot

Product no.	Product name	Contents	GRWT kg
8601	Aka-Clear-2 Powder	1 kg	1,13
8602	Aka-Clear-2 Liquid	500 ml 	0,81
8603	Aka-Clear-2 Powder	10 kg	11,86
8604	NEW Aka-Clear-2 Liquid	2,5 l 	2,40
8605	NEW Aka-Clear-2 Powder	5 kg	5,20

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
8010	Aka-Resin Epoxy	1 kg	1,12
8015	Aka-Resin Epoxy	7,5 kg	8,10

Acrylic Clear thermoplastic resin

Product no.	Product name	Contents	GRWT kg
8025	Aka-Resin Acrylic	1 kg	1,10
8030	Aka-Resin Acrylic	7,5 kg	7,97

Melamine White mineral filled good all round resin

Product no.	Product name	Contents	GRWT kg
8040	Aka-Resin Melamine	1 kg	1,12
8045	Aka-Resin Melamine	7,5 kg	7,90

Phenolic Black wood filled best economy

Product no.	Product name	Contents	GRWT kg
8055	Aka-Resin Phenolic	2,5 kg	2,74
8060	Aka-Resin Phenolic	7,5 kg	8,30

Phenolic SEM Black graphite filled conductive for SEM work

Product no.	Product name	Contents	GRWT kg
8070	Aka-Resin Phenolic SEM	1 kg	1,12
8075	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 Cold Embedding Moulds for all Cold Embedding Resins

Product no.	Product name	Contents	GRWT kg
8825	Aka-Mould 25 mm	10 pc.	0,19
8830	Aka-Mould 30 mm	10 pc.	0,21
8840	Aka-Mould 40 mm	10 pc.	0,28
8850	Aka-Mould 50 mm	10 pc.	0,37

Clip Clip for holding samples in place

Product no.	Product name	Contents	GRWT kg
8805 NEW	Aka-Clip, Stainless Steel	100 pc.	0,05
8810	Aka-TrioClip, Black	100 pc.	0,11
8820	Aka-TrioClip, Black	1000 pc.	1,10

NoStick Release agent for hot or cold embedding

Product no.	Product name	Contents	GRWT kg
8410	Aka-NoStick - Mould release powder for mounting presses	50 g	0,13
8420	Aka-NoStick Liquid - Mould release agent for cold mounting moulds	250 ml	0,32

Grinding



Grinding is the first “real” preparation step. Cutting and Mounting are not always necessary, but for a successful metallographic sample preparation a correct sequence of grinding and polishing steps is a must.

The first step is usually a plane-grinding step, either to level all samples in a sample holder, and/or to remove the initial deformation from the sample surface. Depending on the sample size and the depth of deformation, relatively coarse abrasives are used to obtain short grinding times.

A major goal in sample preparation today is to receive a satisfactory result in the *shortest possible time* at the *lowest possible cost*. Therefore every step must be considered carefully, also in relation to the following step and the required finish. It does not make sense to have a very fast plane-grinding step if that produces a lot of deformation that will take a very long time to remove in the following step(s).

The plane-grinding step must be selected carefully, as it is crucial for the following preparation steps. It must be fast and at the same time produce samples with a very shallow deformation depth. And the better the planeness of the samples after plane grinding, the faster the following step can be carried out.

Plane Grinding



For materials with a hardness higher than 150 HV, the best possible choice is the Aka-Piatto. Aka-Piatto is a multi-layer diamond grinding disc that can replace at least 100 - 200 pieces of SiC Paper. It has a consistently high removal rate and will provide absolutely plane specimens with perfect edge retention.

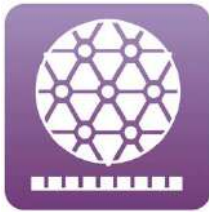
For plane grinding of soft materials with hardness below 150 HV or very ductile materials with a higher hardness Grinding Paper can still be the correct choice, but harder materials will greatly benefit from the Aka-Piatto. Depending on the size and the hardness of the samples, Aka-Piatto P80 - P220 is used for plane grinding.

Usually a single plane grinding step is sufficient when grinding with Piatto. The absolutely plane samples make it possible to speed up the following fine grinding step.

The following table shows the correct application areas for the different grinding consumables.

	Aka-Piatto	Aka-Piatto+	Rhaco Grit Grinding Paper
Plane Grinding	P80, P120, P220	P80, P120, P220	P120, P180, P220, P320
Use with	Water	Water	Water
Hardness range	>150 HV	>150 HV	<400 HV
Applications / Benefits	Long lifetime, continuous removal and perfect planeness. Can replace several grinding paper steps.	Very long lifetime, continuous removal, perfect planeness, finer surface finish for brittle materials like ceramics and sintered metals. Can replace several grinding paper steps.	2 - 3 times longer lifetime and higher removal compared to standard SiC Paper @ P120 - 320. Better flatness on finer # sizes because of thinner paper backing.
For use on magnetic support discs	✓	✓	✓ when used on Aka-Rhaco

Fine Grinding



After plane grinding, traditionally several fine grinding steps in successively finer grit sizes have been used to make the samples ready for polishing. Also here, new technology has made it possible to speed up preparation and to reduce fine grinding to one single step.

Aka-Allegran and Aka-Largan apply a unique system for material removal. Integrated abrasive is released during preparation while abrasive in the form of diamond suspension or diamond spray is applied. The result is high removal, perfect planeness and an exceptional long lifetime.

Aka-Largan 9 and Aka-Allegran-9 replace a number of grinding steps, typically P320 - P1200 with one single fine grinding step. With a constant removal rate these discs are also ideal for automatic preparation systems that rely on constant, reproducible settings on every step.

Alternatively, Aka-Piatto can be used in the more traditional way where several grinding steps are carried out successively. As Aka-Piatto is used with water only, cleaning is easier as with Aka-Allegran or Aka-Largan, and not even necessary in-between preparation steps.

For very soft and/or ductile materials it can still be necessary to use traditional grinding paper.

	Aka-Piatto	Aka-Piatto+	Rhaco Grit Grinding Paper
Fine Grinding	P600, P1200, P2400	P600, P1200	P500, P800, P1000, P1200, P2400, P4000
Use with	Water	Water	Water
Hardness range	>150 HV	>150 HV	<400 HV
Applications / Benefits	Long lifetime, continuous removal and perfect planeness. Can replace several grinding paper steps.	Very long lifetime, continuous removal, perfect planeness, finer surface finish for brittle materials like ceramics and sintered metals. Can replace several grinding paper steps.	2 - 3 times longer lifetime and higher removal compared to standard SiC Paper @ P120 - 320. Better flatness on finer # sizes because of thinner paper backing.
For use on magnetic support discs	✓	✓	✓ when used on Aka-Rhaco

	Aka-Allegran-9	Aka-Allegran-3	Aka-Allegran-1	Aka-Largan-9
Use with	Diamond Suspension 15 - 3 µm	Diamond Suspension 15 - 3 µm	Diamond Suspension (15) - 0.1 µm	Diamond Suspension 15 - 3 µm
Hardness range	>450 HV	>150 HV	>150 HV	<150 HV (<400 HV)
Applications / Benefits	For one-step fine grinding, replaces grinding papers P320 - P1200 in one step. Perfect planeness and edge retention.	For one-step fine grinding, replaces grinding papers P320 - P1200 in one step. Also for 3 µm polishing. Provides very short preparation times, perfect planeness and retains soft phases, like soft inclusions in steel.	Can be used as final polishing step, provides outstanding flatness.	For fine grinding of soft and very soft materials.
For use on magnetic support discs	✓	✓	✓	✓

Aka-Piatto



Unique to Aka-Piatto is the color-coded binder and a wear compensated surface design increasing the planeness of the samples and increasing the life of the Piatto discs.

3 small tabs make it easy to exchange the Piatto discs.

Depending on the sample size and Machine set-up at least 100 and 200 pcs of grinding paper can be substituted by one Piatto disc.

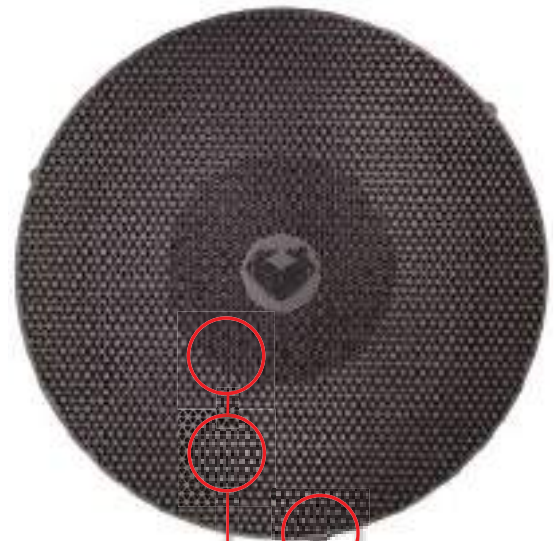
The Piatto discs have to be opened with a dressing stick before the first use, and depending on the material dressed once in a while during use.

We recommend using the Dressing stick 10020 to be found in the Accessories section of this Catalog.

Color-coding of the Aka-Piatto grinding discs:

	#80 / 250 μ m
	#120 / 125 μ m
	#220 / 75 μ m
	#600 / 30 μ m
	#1200 / 15 μ m
	#2400 / 6 μ m

Special features of Aka-Piatto:



Areas with different density for wear compensation

Areas with different density for wear compensation

ø200 mm

Product no.	Product name	Contents	GRWT kg
6520	Aka-Piatto 80 ø200 mm	1 pc.	0,35
6530	Aka-Piatto 120 ø200 mm	1 pc.	0,35
6540	Aka-Piatto 220 ø200 mm	1 pc.	0,35
6550	Aka-Piatto 600 ø200 mm	1 pc.	0,35
6560	Aka-Piatto 1200 ø200 mm	1 pc.	0,35
6570	Aka-Piatto 2400 ø200 mm	1 pc.	0,35

ø250 mm

Product no.	Product name	Contents	GRWT kg
6620	Aka-Piatto 80 ø250 mm	1 pc.	0,40
6630	Aka-Piatto 120 ø250 mm	1 pc.	0,40
6640	Aka-Piatto 220 ø250 mm	1 pc.	0,40
6650	Aka-Piatto 600 ø250 mm	1 pc.	0,40
6660	Aka-Piatto 1200 ø250 mm	1 pc.	0,40
6670	Aka-Piatto 2400 ø250 mm	1 pc.	0,40

ø300 mm

Product no.	Product name	Contents	GRWT kg
6720	Aka-Piatto 80 ø300 mm	1 pc.	0,50
6730	Aka-Piatto 120 ø300 mm	1 pc.	0,50
6740	Aka-Piatto 220 ø300 mm	1 pc.	0,50
6750	Aka-Piatto 600 ø300 mm	1 pc.	0,50
6760	Aka-Piatto 1200 ø300 mm	1 pc.	0,50
6770	Aka-Piatto 2400 ø300 mm	1 pc.	0,50

ø350 mm

Product no.	Product name	Contents	GRWT kg
6820	Aka-Piatto 80 ø350 mm	1 pc.	0,62
6830	Aka-Piatto 120 ø350 mm	1 pc.	0,62
6840	Aka-Piatto 220 ø350 mm	1 pc.	0,62
6850	Aka-Piatto 600 ø350 mm	1 pc.	0,62
6860	Aka-Piatto 1200 ø350 mm	1 pc.	0,62

Aka-Piatto+



Aka-Piatto+ is a series of Piatto discs with even higher diamond concentration than Aka-Piatto.

The effect with Aka-Piatto+ is an improved lifetime and finer surface finish on brittle samples like cermets and ceramics due to the lower specific pressure.

Used on metals it results in finer finish and up to 100% longer lifetime compared to regular Piatto.

Aka-Piatto+ shares all the other features of Aka-Piatto like color-coding, the wear compensated design and the 3 small tabs for easy exchange.

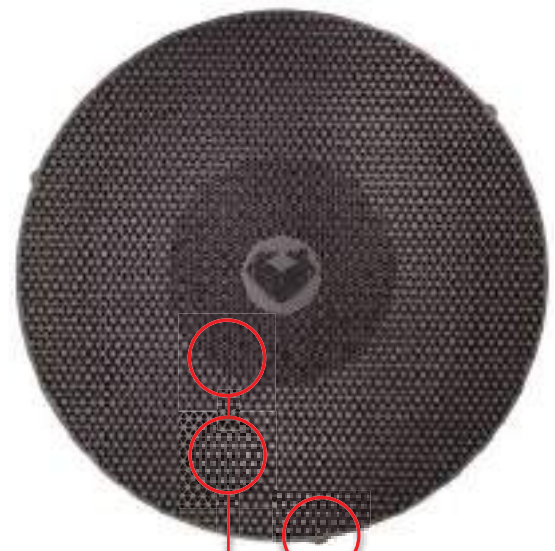
The Piatto+ discs have to be opened with a dressing stick before the first use, and depending on the material dressed once in a while during use.

We recommend using the Dressing stick 10020 to be found in the Accessories section of this Catalog.

Color-coding of the Aka-Piatto+ grinding discs:

	#80 / 250 μ m
	#120 / 125 μ m
	#220 / 75 μ m
	#600 / 30 μ m
	#1200 / 15 μ m

Special features of Aka-Piatto+:



Tabs for easy exchange

Areas with different density for wear compensation

ø200 mm

Product no.	Product name	Contents	GRWT kg
6522	Aka-Piatto 80+ ø200 mm	1 pc.	0,35
6532	Aka-Piatto 120+ ø200 mm	1 pc.	0,35
6542	Aka-Piatto 220+ ø200 mm	1 pc.	0,35
6552	Aka-Piatto 600+ ø200 mm	1 pc.	0,35
6562	Aka-Piatto 1200+ ø200 mm	1 pc.	0,35

ø250 mm

Product no.	Product name	Contents	GRWT kg
6622	Aka-Piatto 80+ ø250 mm	1 pc.	0,40
6632	Aka-Piatto 120+ ø250 mm	1 pc.	0,40
6642	Aka-Piatto 220+ ø250 mm	1 pc.	0,40
6652	Aka-Piatto 600+ ø250 mm	1 pc.	0,40
6662	Aka-Piatto 1200+ ø250 mm	1 pc.	0,40

ø300 mm

Product no.	Product name	Contents	GRWT kg
6722	Aka-Piatto 80+ ø300 mm	1 pc.	0,50
6732	Aka-Piatto 120+ ø300 mm	1 pc.	0,50
6742	Aka-Piatto 220+ ø300 mm	1 pc.	0,50
6752	Aka-Piatto 600+ ø300 mm	1 pc.	0,50
6762	Aka-Piatto 1200+ ø300 mm	1 pc.	0,50

Aka-Allegran/Largan



Aka-Allegran and Aka-Largan are rigid fine-grinding/polishing discs. They provide a unique system for material removal. Built-in abrasive is released when diamond suspension or spray is added during preparation. This unique abrasive system results in high material removal, perfect planeness and a very long lifetime.

Upon delivery the discs are ready to use and need no maintenance.

Aka-Largan is available as Aka-Largan 9, and used for fine grinding of soft materials with a hardness from 50 HV up to 400 HV. Diamond suspension or spray in grain sizes from 15 to 3 μm is added during the preparation.

Aka-Largan 9 replaces a number of grinding steps, typically P320 - P1200 with one single step.




Aka-Allegran is available in three different versions for the preparation of materials with a hardness higher than 150 HV.

Aka-Allegran 9, the hardest disc in the range, is used with 15 to 3 μm diamond suspension or spray for fine-grinding of materials with a hardness above 450 HV. It will replace the grinding steps from P320 - P1200 with one single step.

Aka-Allegran 3, a medium hard disc can also be used with 15 to 3 μm diamond suspension or spray for fine-grinding of materials with a hardness above 150 HV. It will replace the grinding steps from P320 - P1200 with one single step. Used with 6 μm diamonds it will produce perfectly flat samples ready for a final polishing with 1 μm .

Aka-Allegran 1, the softest disc in the range is used for the preparation of materials with a hardness above 150 HV. It can be used with diamond suspension or spray with grain sizes as small as 0.1 μm and can then even be used as a final polishing step, resulting in outstanding planeness.

Color-coding of the Aka-Largan/Allegran fine grinding discs:

			
Aka-Largan 9	Aka-Allegran 9	Aka-Allegran 3	Aka-Allegran 1

Aka-Largan		For materials < 150 Hv	
Product no.	Product name	Contents	GRWT kg
5020	Aka-Largan 9 ø200 mm	2 pc.	0,47
5120	Aka-Largan 9 ø250 mm	2 pc.	0,60
5220	Aka-Largan 9 ø300 mm	2 pc.	0,78
5320	Aka-Largan 9 ø350 mm	2 pc.	0,84

Aka-Allegran-9		For materials > 150 Hv 15 µm - 6 µm	
Product no.	Product name	Contents	GRWT kg
5010	Aka-Allegran 9 ø200 mm	2 pc.	0,47
5110	Aka-Allegran 9 ø250 mm	2 pc.	0,61
5210	Aka-Allegran 9 ø300 mm	2 pc.	0,79
5310	Aka-Allegran 9 ø350 mm	2 pc.	0,84

Aka-Allegran-3		For materials > 150 Hv 3 µm	
Product no.	Product name	Contents	GRWT kg
5015	Aka-Allegran 3 ø200 mm	2 pc.	0,46
5115	Aka-Allegran 3 ø250 mm	2 pc.	0,59
5215	Aka-Allegran 3 ø300 mm	2 pc.	0,75
5315	Aka-Allegran 3 ø350 mm	2 pc.	0,84

Aka-Allegran-1		For materials > 150 Hv 1 µm - 0.1 µm	
Product no.	Product name	Contents	GRWT kg
5017	Aka-Allegran 1 ø200 mm	2 pc.	0,48
5117	Aka-Allegran 1 ø250 mm	2 pc.	0,55
5217	Aka-Allegran 1 ø300 mm	2 pc.	0,76
5317	Aka-Allegran 1 ø350 mm	2 pc.	0,84

Rhaco Grit



If the preparation method requires grinding paper, our own Rhaco Grit has unique advantages:

- With Al₂O₃ as abrasive on P120 - P320, the lifetime is 2-3 times longer compared to SiC Paper
- Better edge retention and planeness on P400 - P1200 because of thinner backing paper
- Available with tab for easy removal from adhesive support discs like Aka-Rhaco
- Available without tab for use on traditional systems
- Replaces self-adhesive paper when used with Aka-Rhaco disc

Because of the very high removal rate and long lifetime, a P120 Rhaco Grit Paper will last longer and remove more material than a traditional P80 SiC Paper.

Grit/grain size conversion table		
European grit size # FEPA P	US grit size # ANSI	Grain size in µm (approx.)
P60		260
P80		200
P100		160
P120	100	125
P150	150	93
P180	180	76
P220	220	68
P240		58
P280	240	52
P320		46
P360	280	39
P400	320	35
P500	360	30
P600		26
P800	400	22
P1000	500	18
P1200	600	14
P1500		12
P2000	800	10
P2400	1000	8
P4000		5
Available as Rhaco Grit		

Special features of Rhaco Grit:



Available with and without tab for easy removal

ø200 mm			
Product no.	Product name	Contents	GRWT kg
7031	Rhaco Grit P120 ø200 mm	100 pc.	1,30
7032	NEW Rhaco Grit P120 ø200 mm, no tap	100 pc.	1,30
7036	Rhaco Grit P180 ø200 mm	100 pc.	1,30
7037	NEW Rhaco Grit P180 ø200 mm, no tap	100 pc.	1,30
7041	Rhaco Grit P220 ø200 mm	100 pc.	1,13
7042	NEW Rhaco Grit P220 ø200 mm, no tap	100 pc.	1,13
7051	Rhaco Grit P320 ø200 mm	100 pc.	1,03
7052	NEW Rhaco Grit P320 ø200 mm, no tap	100 pc.	1,03
7071	Rhaco Grit P500 ø200 mm	100 pc.	0,78
7072	NEW Rhaco Grit P500 ø200 mm, no tap	100 pc.	0,78
7081	Rhaco Grit P600 ø200 mm	100 pc.	0,78
7082	NEW Rhaco Grit P600 ø200 mm, no tap	100 pc.	0,78
7091	Rhaco Grit P800 ø200 mm	100 pc.	0,74
7092	NEW Rhaco Grit P800 ø200 mm, no tap	100 pc.	0,74
7101	Rhaco Grit P1000 ø200 mm	100 pc.	0,70
7102	NEW Rhaco Grit P1000 ø200 mm, no tap	100 pc.	0,70
7111	Rhaco Grit P1200 ø200 mm	100 pc.	0,69
7112	NEW Rhaco Grit P1200 ø200 mm, no tap	100 pc.	0,69
7131	Rhaco Grit P2400 ø200 mm	100 pc.	0,84
7132	NEW Rhaco Grit P2400 ø200 mm	50 pc.	0,84
7133	NEW Rhaco Grit P2400 ø200 mm, no tap	50 pc.	0,84
7141	Rhaco Grit P4000 ø200 mm	100 pc.	0,84
7142	NEW Rhaco Grit P4000 ø200 mm	50 pc.	0,84
7143	NEW Rhaco Grit P4000 ø200 mm, no tap	50 pc.	0,84

ø230 mm			
Product no.	Product name	Contents	GRWT kg
7231	Rhaco Grit P120 ø230 mm	100 pc.	1,80
7232	NEW Rhaco Grit P120 ø230 mm, no tap	100 pc.	1,80
7236	Rhaco Grit P180 ø230 mm	100 pc.	1,80
7237	NEW Rhaco Grit P180 ø230 mm, no tap	100 pc.	1,80
7241	Rhaco Grit P220 ø230 mm	100 pc.	1,34
7242	NEW Rhaco Grit P220 ø230 mm, no tap	100 pc.	1,34

ø230 mm			
Product no.	Product name	Contents	GRWT kg
7251	Rhaco Grit P320 ø230 mm	100 pc.	1,11
7252	NEW Rhaco Grit P320 ø230 mm, no tap	100 pc.	1,11
7271	Rhaco Grit P500 ø230 mm	100 pc.	0,91
7272	NEW Rhaco Grit P500 ø230 mm, no tap	100 pc.	0,91
7281	Rhaco Grit P600 ø230 mm	100 pc.	0,91
7282	NEW Rhaco Grit P600 ø230 mm, no tap	100 pc.	0,91
7291	Rhaco Grit P800 ø230 mm	100 pc.	0,91
7292	NEW Rhaco Grit P800 ø230 mm, no tap	100 pc.	0,91
7301	Rhaco Grit P1000 ø230 mm	100 pc.	0,82
7302	NEW Rhaco Grit P1000 ø230 mm, no tap	100 pc.	0,82
7311	Rhaco Grit P1200 ø230 mm	100 pc.	0,86
7312	NEW Rhaco Grit P1200 ø230 mm, no tap	100 pc.	0,86
7331	Rhaco Grit P2400 ø230 mm	100 pc.	1,04
7332	NEW Rhaco Grit P2400 ø230 mm	50 pc.	1,04
7333	NEW Rhaco Grit P2400 ø230 mm, no tap	50 pc.	1,04
7341	Rhaco Grit P4000 ø230 mm	100 pc.	1,07
7342	NEW Rhaco Grit P4000 ø230 mm	50 pc.	1,07
7343	NEW Rhaco Grit P4000 ø230 mm, no tap	50 pc.	1,07

ø250 mm			
Product no.	Product name	Contents	GRWT kg
7431	Rhaco Grit P120 ø250 mm	100 pc.	2,10
7432	NEW Rhaco Grit P120 ø250 mm, no tap	100 pc.	2,10
7436	Rhaco Grit P180 ø250 mm	100 pc.	1,89
7437	NEW Rhaco Grit P180 ø250 mm, no tap	100 pc.	1,89
7441	Rhaco Grit P220 ø250 mm	100 pc.	1,59
7442	NEW Rhaco Grit P220 ø250 mm, no tap	100 pc.	1,59
7451	Rhaco Grit P320 ø250 mm	100 pc.	1,33
7452	NEW Rhaco Grit P320 ø250 mm, no tap	100 pc.	1,33
7471	Rhaco Grit P500 ø250 mm	100 pc.	1,08
7472	NEW Rhaco Grit P500 ø250 mm, no tap	100 pc.	1,08
7481	Rhaco Grit P600 ø250 mm	100 pc.	1,08
7482	NEW Rhaco Grit P600 ø250 mm, no tap	100 pc.	1,08

ø250 mm			
Product no.	Product name	Contents	GRWT kg
7491	Rhaco Grit P800 ø250 mm	100 pc.	0,82
7492	NEW Rhaco Grit P800 ø250 mm, no tap	100 pc.	0,82
7501	Rhaco Grit P1000 ø250 mm	100 pc.	1,05
7502	NEW Rhaco Grit P1000 ø250 mm, no tap	100 pc.	1,05
7511	Rhaco Grit P1200 ø250 mm	100 pc.	1,01
7512	NEW Rhaco Grit P1200 ø250 mm, no tap	100 pc.	1,01
7531	Rhaco Grit P2400 ø250 mm	100 pc.	1,20
7532	NEW Rhaco Grit P2400 ø250 mm	50 pc.	1,20
7533	NEW Rhaco Grit P2400 ø250 mm, no tap	50 pc.	1,20
7541	Rhaco Grit P4000 ø250 mm	100 pc.	1,15
7542	NEW Rhaco Grit P4000 ø250 mm	50 pc.	1,15
7543	NEW Rhaco Grit P4000 ø250 mm, no tap	50 pc.	1,15

ø300 mm			
Product no.	Product name	Contents	GRWT kg
7631	Rhaco Grit P120 ø300 mm	100 pc.	2,02
7632	NEW Rhaco Grit P120 ø300 mm, no tap	100 pc.	2,02
7636	Rhaco Grit P180 ø300 mm	100 pc.	2,02
7637	NEW Rhaco Grit P180 ø300 mm, no tap	100 pc.	2,02
7641	Rhaco Grit P220 ø300 mm	100 pc.	2,02
7642	NEW Rhaco Grit P220 ø300 mm, no tap	100 pc.	2,02
7651	Rhaco Grit P320 ø300 mm	100 pc.	2,00
7652	NEW Rhaco Grit P320 ø300 mm, no tap	100 pc.	2,00
7671	Rhaco Grit P500 ø300 mm	100 pc.	1,50
7672	NEW Rhaco Grit P500 ø300 mm, no tap	100 pc.	1,50
7681	Rhaco Grit P600 ø300 mm	100 pc.	1,50
7682	NEW Rhaco Grit P600 ø300 mm, no tap	100 pc.	1,50
7691	Rhaco Grit P800 ø300 mm	100 pc.	1,51
7692	NEW Rhaco Grit P800 ø300 mm, no tap	100 pc.	1,51
7701	Rhaco Grit P1000 ø300 mm	100 pc.	1,46
7702	NEW Rhaco Grit P1000 ø300 mm, no tap	100 pc.	1,46
7711	Rhaco Grit P1200 ø300 mm	100 pc.	1,15
7712	NEW Rhaco Grit P1200 ø300 mm, no tap	100 pc.	1,15

ø300 mm

Product no.	Product name	Contents	GRWT kg
7731	Rhaco Grit P2400 ø300 mm	100 pc.	1,75
7732	NEW Rhaco Grit P2400 ø300 mm	50 pc.	1,75
7733	NEW Rhaco Grit P2400 ø300 mm, no tap	50 pc.	1,75
7741	Rhaco Grit P4000 ø300 mm	100 pc.	1,68
7742	NEW Rhaco Grit P4000 ø300 mm	50 pc.	1,68
7743	NEW Rhaco Grit P4000 ø300 mm, no tap	50 pc.	1,68

ø305 mm

Product no.	Product name	Contents	GRWT kg
7822	NEW Rhaco Grit P600 ø305 mm, no tap	100 pc.	1,50
7831	NEW Rhaco Grit P120 ø305 mm	100 pc.	2,02
7832	NEW Rhaco Grit P120 ø305 mm, no tap	100 pc.	2,02
7836	NEW Rhaco Grit P180 ø305 mm	100 pc.	2,02
7837	NEW Rhaco Grit P180 ø305 mm, no tap	100 pc.	2,02
7841	NEW Rhaco Grit P220 ø305 mm	100 pc.	2,02
7842	NEW Rhaco Grit P220 ø305 mm, no tap	100 pc.	2,02
7851	NEW Rhaco Grit P320 ø305 mm	100 pc.	2,00
7852	NEW Rhaco Grit P320 ø305 mm, no tap	100 pc.	2,00
7871	NEW Rhaco Grit P500 ø305 mm	100 pc.	1,50
7872	NEW Rhaco Grit P500 ø305 mm, no tap	100 pc.	1,50
7881	NEW Rhaco Grit P600 ø305 mm	100 pc.	1,50
7891	NEW Rhaco Grit P800 ø305 mm	100 pc.	1,50
7892	NEW Rhaco Grit P800 ø305 mm, no tap	100 pc.	1,50
7901	NEW Rhaco Grit P1000 ø305 mm	100 pc.	1,50
7902	NEW Rhaco Grit P1000 ø305 mm, no tap	100 pc.	1,50
7911	NEW Rhaco Grit P1200 ø305 mm	100 pc.	1,15
7912	NEW Rhaco Grit P1200 ø305 mm, no tap	100 pc.	1,15
7931	NEW Rhaco Grit P2400 ø305 mm	100 pc.	1,15
7932	NEW Rhaco Grit P2400 ø305 mm	50 pc.	1,15
7933	NEW Rhaco Grit P2400 ø305 mm, no tap	50 pc.	1,15
7941	NEW Rhaco Grit P4000 ø305 mm	100 pc.	1,68
7942	NEW Rhaco Grit P4000 ø305 mm	50 pc.	1,68
7943	NEW Rhaco Grit P4000 ø305 mm, no tap	50 pc.	1,68

Grinding Stones



For automatic or semi-automatic plane grinding machines we have both an Al_2O_3 grinding stone for grinding of ferrous metals, and a SiC grinding stone for grinding of non-ferrous metals in our program.

They will fit Struers AbraPlan[®] and MAPS[®] and ATM System Automat[®] and Saphir 375[®] (with adapter) plane grinding machines.

The stones have a diameter of 356 mm at a height of 45 mm with an arbor diameter of 38 mm. The hole for the flange is 125 mm in dia. and 30 mm deep.



Grinding Disc		For metals in general	
Product no.	Product name	Contents	GRWT kg
6070	Al ₂ O ₃ Grinding Stone ø356 mm #150	1 pc.	7,16
6075	NEW SiC Grinding Stone ø356 mm #150	1 pc.	7,16

Polishing



Polishing has to remove the last deformations introduced during grinding and provide a highly reflective finish so the samples can be examined in the microscope.

Soft cloths usually provide the best surface finish but tend to round the edges of the sample and create relief between phases of different hardness.

Hard cloths are good for planeness and edge retention, but tend to leave slight scratches on the surface.

Therefore a compromise has to be found to create the best possible surface finish with the best planeness and least edge rounding, and, if possible, in the shortest possible time.

Our variety of polishing cloths provides, together with the correct abrasives, a solution to every polishing challenge. The cloths are available in two different versions, magnetic and self-adhesive.

Many laboratories are using magnetic support disc for the easy exchange of grinding and polishing discs. In this case the polishing cloths on a steel base are the obvious choice. However, the self adhesive cloths can also be used on magnetic support discs when they are applied on the Aka-Rhaco support disc. This will save both money and reduce metallic waste.



Polishing Cloths



The polishing cloths contain a thick polymer barrier that keeps both abrasive and lubricant at the surface of the cloth to perform the most efficient polishing action.

Paran and Paran-S are relatively hard cloths used for fine-grinding or pre-polishing with 15 μm , 9 μm , 6 μm or 3 μm diamonds.

Daran, Ramda, Moran and Plural are gradually softer cloths for polishing with 6 - 1 μm diamonds.

Napal is used for final polishing with diamond abrasives of 1 μm and finer or for final oxide polishing.

Chemal is used for oxide polishing and especially suited for chemical-mechanical polishing.

The self-adhesive polishing cloths are equipped with a newly developed adhesive with low tack and a unique tab that assures easy placing and removal of the cloths. Unique is also the batch code and a QR code printed directly onto the cloth back.

Without removing the liner from the back of the cloths, they can be used directly on Aka-Rhaco and thus on magnetic support discs. See section Magnetic Adaptation.

All magnetic polishing cloths are based on the cloths above, laminated on a steel disc. These steel discs are equipped with 3 tabs for easy removal from the magnetic support disc.

	Cloth material	Fine grinding	Polishing	Final polishing	Application
Paran	Woven Nylon	15 - 6 μm	3 μm	÷	Fine grinding of soft metals, polishing of hard materials
Paran-S	Non-woven Polyester	15 - 3 μm	6 - 1 μm	÷	Fine grinding of soft metals, polishing of hard materials
Daran	Woven Acetate	÷	6 - 1 μm	1 - 0.25 μm Oxide polishing	Polishing of all materials
Ramda	Woven Acetate	÷	3 - 1 μm	1 μm	Polishing of all materials
Moran	Woven Wool	÷	6 - 1 μm	÷	Polishing of non-ferrous and ferrous metals
Plural	Flocked Viscose	÷	3 - 1 μm	÷	Fast, one-step polishing of steels, sintered carbides and other hard materials. Polishing of unmounted samples
Napal	Flocked Viscose	÷	÷	1 - 0.025 μm	Final polishing of all materials
Chemal	Foamed Neoprene	÷	÷	Oxide polishing	Chemical/mechanical final polishing of all materials

32 mm		Self-adhesive polishing cloths	
Product no.	Product name	Contents	GRWT kg
4420	Aka-Napal ø32 mm	25 pc.	0,05
4430	Aka-Plural ø32 mm	25 pc.	0,05
4440	Aka-Moran ø32 mm	25 pc.	0,05
4450	Aka-Daran ø32 mm	25 pc.	0,05
4455	NEW Aka-Ramda ø32 mm	25 pc.	0,05

200 mm		Self-adhesive polishing cloths	
Product no.	Product name	Contents	GRWT kg
4510	Aka-Chemal ø200 mm	5 pc.	0,39
4520	Aka-Napal ø200 mm	5 pc.	0,12
4530	Aka-Plural ø200 mm	5 pc.	0,35
4540	Aka-Moran ø200 mm	5 pc.	0,37
4550	Aka-Daran ø200 mm	5 pc.	0,32
4555	Aka-Ramda ø200 mm	5 pc.	0,31
4561	NEW Aka-Paran-S ø200 mm	5 pc.	0,36
4570	Aka-Plaran ø200 mm	5 pc.	0,33

250 mm		Self-adhesive polishing cloths	
Product no.	Product name	Contents	GRWT kg
4610	Aka-Chemal ø250 mm	5 pc.	0,47
4620	Aka-Napal ø250 mm	5 pc.	0,40
4630	Aka-Plural ø250 mm	5 pc.	0,42
4640	Aka-Moran ø250 mm	5 pc.	0,46
4650	Aka-Daran ø250 mm	5 pc.	0,37
4655	Aka-Ramda ø250 mm	5 pc.	0,35
4661	NEW Aka-Paran-S ø250 mm	5 pc.	0,44
4670	Aka-Plaran ø250 mm	5 pc.	0,38

300 mm		Self-adhesive polishing cloths	
Product no.	Product name	Contents	GRWT kg
4710	Aka-Chemal ø300 mm	5 pc.	0,58
4720	Aka-Napal ø300 mm	5 pc.	0,48
4730	Aka-Plural ø300 mm	5 pc.	0,51
4740	Aka-Moran ø300 mm	5 pc.	0,59

300 mm		Self-adhesive polishing cloths	
Product no.	Product name	Contents	GRWT kg
4750	Aka-Daran ø300 mm	5 pc.	0,44
4755	Aka-Ramda ø300 mm	5 pc.	0,41
4761	NEW Aka-Paran-S ø300 mm	5 pc.	0,54
4770	Aka-Plaran ø300 mm	5 pc.	0,45

350 mm		Self-adhesive polishing cloths	
Product no.	Product name	Contents	GRWT kg
4810	Aka-Chemal ø350 mm	5 pc.	0,72
4820	Aka-Napal ø350 mm	5 pc.	0,59
4830	Aka-Plural ø350 mm	5 pc.	0,63
4840	Aka-Moran ø350 mm	5 pc.	0,73
4850	Aka-Daran ø350 mm	5 pc.	0,54
4855	Aka-Ramda ø350 mm	5 pc.	0,51
4861	NEW Aka-Paran-S ø350 mm	5 pc.	0,67
4870	Aka-Plaran ø350 mm	5 pc.	0,57

200 mm Magnetic polishing cloths

Product no.	Product name	Contents	GRWT kg
4010	Mag-Chemal ø200 mm	5 pc.	0,94
4020	Mag-Napal ø200 mm	5 pc.	0,89
4030	Mag-Plural ø200 mm	5 pc.	0,90
4040	Mag-Moran ø200 mm	5 pc.	0,92
4050	Mag-Daran ø200 mm	5 pc.	0,87
4055	Mag-Ramda ø200 mm	5 pc.	0,86
4061 NEW	Mag-Paran-S ø200 mm	5 pc.	0,92
4070	Mag-Plaran ø200 mm	5 pc.	0,88

250 mm Magnetic polishing cloths

Product no.	Product name	Contents	GRWT kg
4110	Mag-Chemal ø250 mm	5 pc.	1,33
4120	Mag-Napal ø250 mm	5 pc.	1,25
4130	Mag-Plural ø250 mm	5 pc.	1,28
4140	Mag-Moran ø250 mm	5 pc.	1,32
4150	Mag-Daran ø250 mm	5 pc.	1,23
4155	Mag-Ramda ø250 mm	5 pc.	1,21
4161 NEW	Mag-Paran-S ø250 mm	5 pc.	1,30
4170	Mag-Plaran ø250 mm	5 pc.	1,24

300 mm Magnetic polishing cloths

Product no.	Product name	Contents	GRWT kg
4210	Mag-Chemal ø300 mm	5 pc.	1,81
4220	Mag-Napal ø300 mm	5 pc.	1,71
4230	Mag-Plural ø300 mm	5 pc.	1,75
4240	Mag-Moran ø300 mm	5 pc.	1,83
4250	Mag-Daran ø300 mm	5 pc.	1,68
4255	Mag-Ramda ø300 mm	5 pc.	1,65
4261 NEW	Mag-Paran-S ø300 mm	5 pc.	1,78
4270	Mag-Plaran ø300 mm	5 pc.	1,69

350 mm Magnetic polishing cloths

Product no.	Product name	Contents	GRWT kg
3910 NEW	Mag-Chemal ø350 mm	5 pc.	2,45

350 mm		Magnetic polishing cloths		
Product no.		Product name	Contents	GRWT kg
3920	NEW	Mag-Napal ø350 mm	5 pc.	2,45
3930	NEW	Mag-Plural ø350 mm	5 pc.	2,45
3940	NEW	Mag-Moran ø350 mm	5 pc.	2,45
3950	NEW	Mag-Daran ø350 mm	5 pc.	2,45
3955	NEW	Mag-Ramda ø350 mm	5 pc.	2,45
3961	NEW	Mag-Paran-S ø350 mm	5 pc.	2,45
3970	NEW	Mag-Plaran ø350 mm	5 pc.	2,45

Diamond Products



The evolution of diamond products:

Diamond Paste was the first diamond product to be used instead of alumina for polishing of metallographic samples. A small amount of diamond paste is distributed manually on the polishing cloth before preparation. During the preparation process only lubricant is added to achieve the correct lubrication and cooling action. Diamond paste cannot be added during the preparation process, it cannot be dosed automatically and it cannot be used on rigid discs.

To improve on that, **Diamond Spray** was introduced. It can be applied during the preparation process, but automatic dosing demanded ingenious constructions and never became common.

When **Diamond Suspension** was developed, precise automatic dosing was made possible by using peristaltic pumps and reproducible preparation methods with well-defined dosing levels were a reality. However, as from the beginning, diamond and lubricant were still applied individually.

The next logical step was to combine suspension and lubricant into one liquid, the **2-in-1 Diamond Suspension**. These 2-in-1 suspensions guarantee the correct suspension/lubricant ratio at all times and combine the best possible preparation results with utmost ease of use.

In between the development of the different suspensions the **Diamond Stick** was introduced as a substitute of the diamond paste. The diamond stick is easier to use as the diamond paste, and is, because of the very high diamond concentration, recommended for priming a new, unused polishing cloth. It can, contrary to Diamond Paste, also be added during preparation.

To cater for all the different requests and to satisfy our customers' wishes, we have developed the widest selection of high quality diamond products.

Most of our diamond products are available in two different versions, with either monocrystalline or polycrystalline diamonds.

The first diamonds to be used for metallographic polishing were natural, monocrystalline diamonds, as used in the production of jewelry. Since then the demand for diamonds for polishing applications has increased dramatically and diamonds are now produced artificially.

Artificial monocrystalline diamonds have the same properties and have replaced natural diamonds in most metallographic applications. But for the highest requirements and the best preparation results, polycrystalline diamonds are used.

Polycrystalline diamonds break down over time, continuously producing small abrasive edges that provide high material removal while producing only shallow scratches. Monocrystalline diamonds will get more and more round over time, losing their cutting ability.

2 in 1 Suspensions	DiaMaxx		DiaDoublo		
	Poly	Mono	Poly	Mono	WF
Ease of use	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓	✓✓✓✓✓
Diamond concentration	+++	+++	++	++	++
Removal rate	↑↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑
For water-free preparation	÷	÷	÷	÷	✓

Suspensions	Aka-Poly			Aka-Mono	
	Aka-Poly+	Aka-Poly	Aka-Poly WF	Aka-Mono+	Aka-Mono
Ease of use	✓✓✓✓	✓✓✓✓	✓✓✓✓	✓✓✓✓	✓✓✓✓
Diamond concentration	+++	++	++	+++	++
Removal rate	↑↑↑↑↑	↑↑↑	↑↑↑	↑↑↑↑	↑↑↑
For water-free preparation	÷	÷	✓	÷	÷

Other	Diamond Spray		AkaStick		AkaPaste	
	Poly	Mono	Poly	Mono	Poly	Mono
Ease of use	✓✓✓	✓✓✓	✓✓	✓✓	✓	✓
Diamond concentration	+++	+++	++++	++++	+++++	+++++
Removal rate	↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑
For water-free preparation	✓	✓	✓	✓	✓	✓



2-in-1 Diamond Suspensions



DiaMaxx

DiaMaxx is a ready mix of lubricant and suspension, it is permanently stable and thus ensures reproducible results.

Based on our High Concentration Aka+ suspensions and our high removal Aka-Lube, Clear+ we have formulated a combination product that combines quick preparation with ease of use. DiaMaxx does not contain any oil and is therefore very easy to clean.

DiaMaxx meets the highest requirements in metallographic sample preparation and is available with polycrystalline diamonds as DiaMaxx Poly and with monocrystalline diamonds as DiaMaxx Mono.



Poly		0.25 μm - 1 μm final polishing	
Product no.	Product name	Contents	GRWT kg
301000	DiaMaxx Poly 0.25 μm	500 ml	0,62
301500	DiaMaxx Poly 0.25 μm	5 l	5,31
301600	NEW DiaMaxx Poly 0.7 μm	500 ml	0,62
301700	NEW DiaMaxx Poly 0.7 μm	5 l	5,31
302000	DiaMaxx Poly 1 μm	500 ml	0,62
302500	DiaMaxx Poly 1 μm	5 l	5,31

Poly		3 μm - 6 μm polishing	
Product no.	Product name	Contents	GRWT kg
302600	NEW DiaMaxx Poly 2.5 μm	500 ml	0,62
302700	NEW DiaMaxx Poly 2.5 μm	5 l	5,31
303000	DiaMaxx Poly 3 μm	500 ml	0,62
303500	DiaMaxx Poly 3 μm	5 l	5,31
304000	DiaMaxx Poly 6 μm	500 ml	0,62
304500	DiaMaxx Poly 6 μm	5 l	5,31

Poly		9 μm - 15 μm stock removal	
Product no.	Product name	Contents	GRWT kg
305000	DiaMaxx Poly 9 μm	500 ml	0,62
305500	DiaMaxx Poly 9 μm	5 l	5,31
306000	DiaMaxx Poly 15 μm	500 ml	0,62
306500	DiaMaxx Poly 15 μm	5 l	5,31

Mono		1 μm final polishing	
Product no.	Product name	Contents	GRWT kg
3220	DiaMaxx Mono 1 μm	500 ml	0,62
3223	DiaMaxx Mono 1 μm	2,5 l	2,76
3225	DiaMaxx Mono 1 μm	5 l	5,31

Mono		3 μm - 6 μm polishing	
Product no.	Product name	Contents	GRWT kg
3230	DiaMaxx Mono 3 μm	500 ml	0,62
3233	DiaMaxx Mono 3 μm	2,5 l	2,76
3235	DiaMaxx Mono 3 μm	5 l	5,31

Mono		3 μm - 6 μm polishing	
Product no.	Product name	Contents	GRWT kg
3240	DiaMaxx Mono 6 μm	500 ml	0,62
3243	DiaMaxx Mono 6 μm	2,5 l	2,76
3245	DiaMaxx Mono 6 μm	5 l	5,31

Mono		9 μm - 15 μm stock removal	
Product no.	Product name	Contents	GRWT kg
3250	DiaMaxx Mono 9 μm	500 ml	0,62
3253	DiaMaxx Mono 9 μm	2,5 l	2,76
3255	DiaMaxx Mono 9 μm	5 l	5,31
3260	DiaMaxx Mono 15 μm	500 ml	0,62
3263	DiaMaxx Mono 15 μm	2,5 l	2,76
3265	DiaMaxx Mono 15 μm	5 l	5,31

DiaDoubo



DiaDoubo is a ready mix of lubricant and suspension, it is permanently stable and thus ensures reproducible results.

Based on our lubricants and diamond suspensions we have formulated a combination product that makes dosing and lubrication as easy as can be.

DiaDoubo is perfect for all standard applications.

DiaDoubo is available with polycrystalline diamonds as DiaDoubo Poly and with monocrystalline diamonds as DiaDoubo Mono.

Contrary to competing two-in-one diamond suspensions, both DiaMaxx and DiaDoubo are perfectly compatible with any polishing cloth or fine-grinding disc, thus you can work with the usual micron sizes.



Poly		0.25 μm - 1 μm final polishing	
Product no.	Product name	Contents	GRWT kg
3010	DiaDoublo Poly 0.25 μm	500 ml	0,60
3013	DiaDoublo Poly 0.25 μm	2,5 l	2,65
3015	DiaDoublo Poly 0.25 μm	5 l	5,12
3020	DiaDoublo Poly 1 μm	500 ml	0,60
3023	DiaDoublo Poly 1 μm	2,5 l	2,65
3025	DiaDoublo Poly 1 μm	5 l	5,12

Poly		3 μm - 6 μm polishing	
Product no.	Product name	Contents	GRWT kg
3030	DiaDoublo Poly 3 μm	500 ml	0,60
3033	DiaDoublo Poly 3 μm	2,5 l	2,65
3035	DiaDoublo Poly 3 μm	5 l	5,12
3040	DiaDoublo Poly 6 μm	500 ml	0,60
3043	DiaDoublo Poly 6 μm	2,5 l	2,65
3045	DiaDoublo Poly 6 μm	5 l	5,12

Poly		9 μm - 15 μm stock removal	
Product no.	Product name	Contents	GRWT kg
3050	DiaDoublo Poly 9 μm	500 ml	0,60
3053	DiaDoublo Poly 9 μm	2,5 l	2,65
3055	DiaDoublo Poly 9 μm	5 l	5,12
3060	DiaDoublo Poly 15 μm	500 ml	0,60
3063	DiaDoublo Poly 15 μm	2,5 l	2,65
3065	DiaDoublo Poly 15 μm	5 l	5,12

Mono		1 μm final polishing	
Product no.	Product name	Contents	GRWT kg
3120	DiaDoublo Mono 1 μm	500 ml	0,60
3123	DiaDoublo Mono 1 μm	2,5 l	2,65
3125	DiaDoublo Mono 1 μm	5 l	5,12

Mono		3 μm - 6 μm polishing	
Product no.	Product name	Contents	GRWT kg
3130	DiaDoublo Mono 3 μm	500 ml	0,60

Mono		3 μm - 6 μm polishing	
Product no.	Product name	Contents	GRWT kg
3133	DiaDoublo Mono 3 μm	2,5 l	2,65
3135	DiaDoublo Mono 3 μm	5 l	5,12
3140	DiaDoublo Mono 6 μm	500 ml	0,60
3143	DiaDoublo Mono 6 μm	2,5 l	2,65
3145	DiaDoublo Mono 6 μm	5 l	5,12

Mono		9 μm - 15 μm stock removal	
Product no.	Product name	Contents	GRWT kg
3150	DiaDoublo Mono 9 μm	500 ml	0,60
3153	DiaDoublo Mono 9 μm	2,5 l	2,65
3155	DiaDoublo Mono 9 μm	5 l	5,12
3160	DiaDoublo Mono 15 μm	500 ml	0,60
3163	DiaDoublo Mono 15 μm	2,5 l	2,65
3165	DiaDoublo Mono 15 μm	5 l	5,12

DiaDoubo Water-free



DiaDoubo Water-free is made from a mix of non-toxic and non-flammable glycols and does therefore not come with any hazard ratings. It contains less than 0.1% water and is perfect for preparation of water sensitive materials.

Being oil-free it is very easy to clean.

DiaDoubo Water-free is only available with polycrystalline diamonds.



Water-free		Polishing of water sensitive material		
Product no.	Product name	Contents	GRWT kg	
3310	DiaDoublo Poly Water-free 0.25 μm	500 ml	0,62	
3320	DiaDoublo Poly Water-free 1 μm	500 ml	0,62	
3330	DiaDoublo Poly Water-free 3 μm	500 ml	0,62	
3340	DiaDoublo Poly Water-free 6 μm	500 ml	0,62	
3350	DiaDoublo Poly Water-free 9 μm	500 ml	0,62	
3360	DiaDoublo Poly Water-free 15 μm	500 ml	0,62	

Diamond Suspensions



Aka-Poly and Aka-Mono

Our diamond suspensions have been developed to combine short preparation times with reproducible results.

They have of course been formulated with environmentally friendly and easily biodegradable components; and they do not carry any hazard ratings.

In a special process we are able to assure agglomerate-free suspensions from nano-sized 25 nm to 15 μm . This assures outstanding finish without large scratches from agglomerated diamond particles.



Poly		25 nm - 1 μm final polishing	
Product no.	Product name	Contents	GRWT kg
2200	Aka-Poly 0.025 μm	250 ml	0,34
2203	Aka-Poly 0.05 μm	250 ml	0,34
2205	Aka-Poly 0.1 μm	250 ml	0,34
2206	Aka-Poly 0.1 μm	1 l	1,16
2210	Aka-Poly 0.25 μm	250 ml	0,34
2215	Aka-Poly 0.25 μm	1 l	1,16
2216	NEW Aka-Poly 0.7 μm	1 l	1,16
2217	Aka-Poly 0.25 μm	2,5 l	2,66
2218	Aka-Poly 0.25 μm	5 l	5,14
2219	NEW Aka-Poly 0.5 μm	250 ml	0,34
2220	Aka-Poly 1 μm	250 ml	0,34
2221	NEW Aka-Poly 0.5 μm	1 l	1,16
2225	Aka-Poly 1 μm	1 l	1,16
2227	Aka-Poly 1 μm	2,5 l	2,66
2229	Aka-Poly 1 μm	5 l	5,14

Poly		3 μm - 6 μm polishing	
Product no.	Product name	Contents	GRWT kg
2230	Aka-Poly 3 μm	250 ml	0,34
2235	Aka-Poly 3 μm	1 l	1,16
2236	NEW Aka-Poly 2.5 μm	1 l	1,16
2237	Aka-Poly 3 μm	2,5 l	2,66
2239	Aka-Poly 3 μm	5 l	5,14
2240	Aka-Poly 6 μm	250 ml	0,34
2245	Aka-Poly 6 μm	1 l	1,16
2247	Aka-Poly 6 μm	2,5 l	2,66
2249	Aka-Poly 6 μm	5 l	5,14

Poly		9 μm - 15 μm stock removal	
Product no.	Product name	Contents	GRWT kg
2250	Aka-Poly 9 μm	250 ml	0,34
2255	Aka-Poly 9 μm	1 l	1,16
2257	Aka-Poly 9 μm	2,5 l	2,66

Poly		9 μm - 15 μm stock removal	
Product no.	Product name	Contents	GRWT kg
2259	Aka-Poly 9 μm	5 l	5,14
2260	Aka-Poly 15 μm	250 ml	0,34
2265	Aka-Poly 15 μm	1 l	1,16
2267	Aka-Poly 15 μm	2,5 l	2,66
2269	Aka-Poly 15 μm	5 l	5,14

Mono		1 μm final polishing	
Product no.	Product name	Contents	GRWT kg
2320	Aka-Mono 1 μm	250 ml	0,34
2325	Aka-Mono 1 μm	1 l	1,16
2327	Aka-Mono 1 μm	2,5 l	2,66
2329	Aka-Mono 1 μm	5 l	5,14

Mono		3 μm - 6 μm polishing	
Product no.	Product name	Contents	GRWT kg
2330	Aka-Mono 3 μm	250 ml	0,34
2335	Aka-Mono 3 μm	1 l	1,16
2337	Aka-Mono 3 μm	2,5 l	2,66
2339	Aka-Mono 3 μm	5 l	5,14
2340	Aka-Mono 6 μm	250 ml	0,34
2345	Aka-Mono 6 μm	1 l	1,16
2347	Aka-Mono 6 μm	2,5 l	2,66
2349	Aka-Mono 6 μm	5 l	5,14

Mono		9 μm - 15 μm stock removal	
Product no.	Product name	Contents	GRWT kg
2350	Aka-Mono 9 μm	250 ml	0,34
2355	Aka-Mono 9 μm	1 l	1,16
2357	Aka-Mono 9 μm	2,5 l	2,66
2359	Aka-Mono 9 μm	5 l	5,14
2360	Aka-Mono 15 μm	250 ml	0,34
2365	Aka-Mono 15 μm	1 l	1,16
2367	Aka-Mono 15 μm	2,5 l	2,66
2369	Aka-Mono 15 μm	5 l	5,14

Aka-Poly+ and Aka-Mono+



Aka-Mono+ and Aka-Poly+ have twice the diamond concentration compared to Aka-Poly and Aka-Mono. When used in combination with Aka-Lube Clear+ this assures outstanding removal rates, allowing for 30% - 40% reduction in preparation time.

When cost is more of an issue than preparation time, you can reduce the dosing levels of Aka-Mono+ and Aka-Poly+ diamond suspension to half of that used normally. This will give you the same amount of diamonds as with regular concentration Aka-Poly and Aka-Mono and thus the same removal rate and polishing time.

The savings in cost of diamond suspension is about 30% over our already competitively priced suspensions.



Poly+ High concentration fast preparation or economic use			
Product no.	Product name	Contents	GRWT kg
2213	Aka-Poly+ 0.25 μ m	250 ml	0,34
2223	Aka-Poly+ 1 μ m	250 ml	0,34
2224	Aka-Poly+ 1 μ m	1 l	1,16
2233	Aka-Poly+ 3 μ m	250 ml	0,34
2234	Aka-Poly+ 3 μ m	1 l	1,16
2243	Aka-Poly+ 6 μ m	250 ml	0,34
2244	Aka-Poly+ 6 μ m	1 l	1,16
2253	Aka-Poly+ 9 μ m	250 ml	0,34
2254	Aka-Poly+ 9 μ m	1 l	1,16
2263	Aka-Poly+ 15 μ m	250 ml	0,34
2264	Aka-Poly+ 15 μ m	1 l	1,16

Mono+ High concentration fast preparation or economic use			
Product no.	Product name	Contents	GRWT kg
2323	Aka-Mono+ 1 μ m	250 ml	0,34
2324	Aka-Mono+ 1 μ m	1 l	1,16
2326	Aka-Mono+ 1 μ m	2,5 l	2,66
2333	Aka-Mono+ 3 μ m	250 ml	0,34
2334	Aka-Mono+ 3 μ m	1 l	1,16
2343	Aka-Mono+ 6 μ m	250 ml	0,34
2344	Aka-Mono+ 6 μ m	1 l	1,16
2346	Aka-Mono+ 6 μ m	2,5 l	2,66
2353	Aka-Mono+ 9 μ m	250 ml	0,34
2354	Aka-Mono+ 9 μ m	1 l	1,16
2356	Aka-Mono+ 9 μ m	2,5 l	2,66
2363	Aka-Mono+ 15 μ m	250 ml	0,34
2364	Aka-Mono+ 15 μ m	1 l	1,16
2366	Aka-Mono+ 15 μ m	2,5 l	2,66

Aka-Poly Water-free



These suspensions are fully glycol based thus free of oil and any hazardous or flammable components and do therefore not come with any hazard ratings. They contain less than 0.1% water and are perfect for the preparation of water sensitive specimens.

Being oil-free, the suspensions also are very easy to clean. Aka-Poly Water-free is only available with polycrystalline diamonds.



Water-free		Polishing of water sensitive material	
Product no.	Product name	Contents	GRWT kg
2010	Aka-Poly Water-free 0.25 μ m	250 ml	0,35
2012	Aka-Poly Water-free 0.25 μ m	1 l	1,23
2020	Aka-Poly Water-free 1 μ m	250 ml	0,35
2022	Aka-Poly Water-free 1 μ m	1 l	1,23
2030	Aka-Poly Water-free 3 μ m	250 ml	0,35
2032	Aka-Poly Water-free 3 μ m	1 l	1,23
2040	Aka-Poly Water-free 6 μ m	250 ml	0,35
2042	Aka-Poly Water-free 6 μ m	1 l	1,23
2050	Aka-Poly Water-free 9 μ m	250 ml	0,35
2052	Aka-Poly Water-free 9 μ m	1 l	1,23
2060	Aka-Poly Water-free 15 μ m	250 ml	0,35
2062	Aka-Poly Water-free 15 μ m	1 l	1,23

Diamond Spray












Diamond Spray is easy to use, hassle-free and because of the absence of liquid leaves a free-cutting layer of diamonds resulting in high removal rates.

Diamond Spray is available with polycrystalline diamonds as Aka-Spray Poly and with monocrystalline diamonds as Aka-Spray Mono.

Our Diamond Spray contains harmless CO₂ and less than 0.1 % water; hence it is well suited for water-free preparation.



Poly		0.25 μm - 15 μm		
Product no.	Product name	Contents		GRWT kg
2410	Aka-Spray Poly 0.25 μm	150 ml		0,20
2420	Aka-Spray Poly 1 μm	150 ml		0,20
2430	Aka-Spray Poly 3 μm	150 ml		0,20
2440	Aka-Spray Poly 6 μm	150 ml		0,20
2450	Aka-Spray Poly 9 μm	150 ml		0,20

Mono		1 μm - 15 μm		
Product no.	Product name	Contents		GRWT kg
2520	Aka-Spray Mono 1 μm	150 ml		0,20
2530	Aka-Spray Mono 3 μm	150 ml		0,20
2540	Aka-Spray Mono 6 μm	150 ml		0,20
2550	Aka-Spray Mono 9 μm	150 ml		0,20

Diamond Stick



Diamond Stick is mainly used for manual polishing and recommended for priming of new polishing cloths. Diamond Stick is easier to apply than Diamond Paste; it can even be applied during the process.

Our Diamond Stick is compatible with water, glycol and ethanol based lubricants. It contains less than 0.1 % water, and is therefore perfect for water-free preparation.

Diamond Stick is available with polycrystalline diamonds as Aka-Stick Poly and with monocrystalline diamonds as Aka-Stick Mono.



Poly		0.25 μm - 9 μm		
Product no.	Product name	Contents	GRWT kg	
1610	Aka-Stick Poly 0.25 μm	20 ml	0,09	
1616	NEW Aka-Stick Poly 0.7 μm	20 ml	0,09	
1620	Aka-Stick Poly 1 μm	20 ml	0,09	
1625	NEW Aka-Stick Poly 2.5 μm	20 ml	0,09	
1630	Aka-Stick Poly 3 μm	20 ml	0,09	
1640	Aka-Stick Poly 6 μm	20 ml	0,09	
1650	Aka-Stick Poly 9 μm	20 ml	0,09	

Mono		1 μm - 9 μm		
Product no.	Product name	Contents	GRWT kg	
1720	Aka-Stick Mono 1 μm	20 ml	0,09	
1730	Aka-Stick Mono 3 μm	20 ml	0,09	
1740	Aka-Stick Mono 6 μm	20 ml	0,09	
1750	Aka-Stick Mono 9 μm	20 ml	0,09	

Diamond Paste



Diamond Paste is mainly used for manual polishing and quick charging of new polishing cloths.

Our diamond paste is homogeneous, easy flowing and compatible with water, glycol and ethanol based lubricants. It contains less than 0.1 % water, and is therefore perfect for water-free preparation.

Diamond Paste is available with polycrystalline diamonds as Aka-Paste Poly and with monocrystalline diamonds as Aka-Paste Mono.



Poly		0.25 μm - 15 μm	
Product no.	Product name	Contents	GRWT kg
2610	Aka-Paste Poly 0.25 μm	10 ml	0,06
2616	NEW Aka-Paste Poly 0.7 μm	10 ml	0,06
2620	Aka-Paste Poly 1 μm	10 ml	0,06
2625	NEW Aka-Paste Poly 2.5 μm	10 ml	0,06
2630	Aka-Paste Poly 3 μm	10 ml	0,06
2640	Aka-Paste Poly 6 μm	10 ml	0,06
2650	Aka-Paste Poly 9 μm	10 ml	0,06
2660	Aka-Paste Poly 15 μm	10 ml	0,06

Mono		1 μm - 15 μm	
Product no.	Product name	Contents	GRWT kg
2720	Aka-Paste Mono 1 μm	10 ml	0,06
2730	Aka-Paste Mono 3 μm	10 ml	0,06
2740	Aka-Paste Mono 6 μm	10 ml	0,06
2750	Aka-Paste Mono 9 μm	10 ml	0,06
2760	Aka-Paste Mono 15 μm	10 ml	0,06

Oxide Polishing Suspensions



For the final polishing step, where the very last deformations have to be removed, sub-micron sized oxide polishing suspensions are used.

For general applications alumina suspension is used, and for the more demanding applications silica suspensions are the best choice.

The silica suspensions perform a chemical-mechanical polishing action. During polishing, the sample surface is slightly attacked. The resulting layer is removed by the sub-micron silica grains, leaving the sample surface absolutely deformation-free.

We offer a wide selection of silica and alumina suspensions for the final polishing of different materials:

- The super fine grained colloidal silica or the slightly coarser fumed silica suspensions
- Grain sizes from 0.050 μm to 0.2 μm (50 to 200 nm)
- Unique system to prevent crystal formation
- Our unique water-free suspension of 0.2 μm fumed silica
- The neutral alumina suspension



Alkaline		pH 9 - 10		
Product no.	Product name	Contents	GRWT kg	
1000	Fumed Silica Suspension 0.12 μm Alkaline	1 l	1,20	
1010	Fumed Silica Suspension 0.12 μm Alkaline	5 l	5,70	
1020	Colloidal Silica Suspension 50 nm Alkaline	1 l	1,47	
1030	Colloidal Silica Suspension 50 nm Alkaline	5 l	6,67	
1080	Fumed Silica Suspension 0.2 μm Alkaline	1 l	1,29	
1090	Fumed Silica Suspension 0.2 μm Alkaline	5 l	5,77	

Water-free		Final polishing of water sensitive material		
Product no.	Product name	Contents	GRWT kg	
1060	Fumed Silica Suspension 0.2 μm Water-free	1 l	1,20	
1070	Fumed Silica Suspension 0.2 μm Water-free	5 l	6,16	

Alumina		pH 7 Neutral for general final polishing		
Product no.	Product name	Contents	GRWT kg	
1100	NEW Alumina Suspension 50 nm Neutral	1 l	1,10	
1110	NEW Alumina Suspension 50 nm Neutral	5 l	5,50	

Lubricants



All diamond products other than our 2-in-1 suspensions require the addition of a lubricant during preparation. The lubricant serves as lubricating and cooling liquid. It has to meet the correct balance between the highest possible removal rate and the best possible surface finish.

Depending on the material to be prepared, and the fine grinding disc or polishing cloth used, the right lubricant has to be selected.

Our water-based lubricants Aka-Lube Green, Yellow and Red utilize a 2-phase system, with particle sizes in the nano range. This allows for the lubricant to get in between the diamond and the sample into the area where the actual abrasion is taking place. This maximizes the lubrication effect.

Water-based lubricants benefit from a high lubrication effect hence reducing heat generation. Along with low evaporation rates this means very stable and uniform preparation. All our lubricants have low viscosity.



	<p>Aka-Lube, Clear+ is a superior polymer based lubricant helping to achieve outstanding removal rates. Together with Aka-Poly+ and Aka-Mono+ it will provide the fastest possible preparation results.</p>
	<p>Aka-Lube, Clear is the water-free non-hazardous, non-flammable version of Aka-Clear+ and ideal for the preparation of water-sensitive materials.</p>
	<p>Aka-Lube, Green maintains a very thin lubricating film, perfect for high removal in the initial preparation stages, for fine grinding and pre-polishing</p>
	<p>Aka-Lube, Yellow provides a good combination between lubricating and cooling and is used as a general lubricant.</p>
	<p>Aka-Lube, Red produces a thick lubrication film; ideal for final polishing and scratch-free finishes on soft materials.</p>
	<p>Aka-Lube, Blue is a traditional water-free ethanol based lubricant for general purposes and for the preparation of water sensitive materials.</p>
	<p>Aka-Lube, Blue Concentrate contains all the active ingredients of Aka-Lube, Blue and is simply mixed with ethanol 99% in a ratio of 1:10. Shipping of the concentrate saves both cost and eliminates the risk of shipping a flammable liquid that easily can be sourced locally.</p>

Red **Thick lubrication film, best finish**

Product no.	Product name	Contents	GRWT kg
3400	Aka-Lube Red	1 l	1,12
3410	Aka-Lube Red	5 l	5,09

Yellow **Medium lubrication film, general lubricant**

Product no.	Product name	Contents	GRWT kg
3700	Aka-Lube Yellow	1 l	1,16
3710	Aka-Lube Yellow	5 l	5,10

Green **Thin lubrication film, high stock removal**

Product no.	Product name	Contents	GRWT kg
3600	Aka-Lube Green	1 l	1,16
3610	Aka-Lube Green	5 l	5,10



Clear+ **Very thin film, use with Aka-Poly+ and Aka-Mono+**

Product no.	Product name	Contents	GRWT kg
3800	Aka-Lube Clear+	1 l	1,20
3810	Aka-Lube Clear+	5 l	5,33

Clear **Water-free, preparation of water sensitive material**

Product no.	Product name	Contents	GRWT kg
3850	Aka-Lube Clear Water-free	1 l	1,20
3860	Aka-Lube Clear Water-free	5 l	5,33

Blue **Thin lubrication film, high stock removal, Ethanol based**

Product no.	Product name	Contents	GRWT kg
3500	Aka-Lube Blue	1 l 	0,97
3510	Aka-Lube Blue	5 l 	4,30

Blue **Concentrate. Ethanol to be added by end-user**

Product no.	Product name	Contents	GRWT kg
3511	Aka-Lube Blue concentrate	500 ml	0,61
3515	Aka-Lube Blue concentrate	5 l	5,39

Magnetic Adaptation



Today, magnetic support discs are more and more common because they facilitate the exchange of grinding and polishing discs.

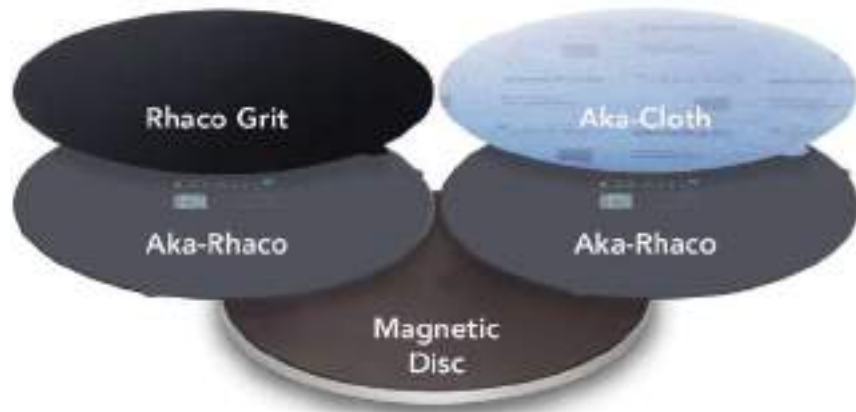
Instead of removing the complete aluminium disc from the grinding/ polishing machine only the preparation surface is exchanged. For that purpose, modern grinding discs like Aka-Piatto and fine-grinding discs like Aka-Allegran or Aka-Largan are produced directly on a thin steel disc.

For the best grinding action a stiff support like a steel disc is necessary.

However, not all preparation methods allow the use of these grinding and fine-grinding discs, but still require the use of grinding paper. Several solutions are available to use grinding paper on magnetic support discs, but the most efficient and cost effective solution is our Aka-Rhaco.

Aka-Rhaco is a thin steel disc with a soft polymer coating. It will safely hold grinding papers allowing over the edge grinding and substituting expensive PSA or foil backed grinding papers. Aka-Rhaco will last for over 1000 applications and will perform perfectly with our own Rhaco-Grit grinding paper. This is equipped with a tab for easy removal and a non-woven paper backing that prevents curling.

Instead of using more expensive magnetic polishing cloths on steel discs, the standard Aka-Cloths can also be placed on Aka-Rhaco without removing the liner. Place the cloth on top of Aka-Rhaco and you have a magnetic cloth. When the cloth is worn, simply pull it off and re-use the Aka-Rhaco.



Aka-Rhaco is available with 3 backings:

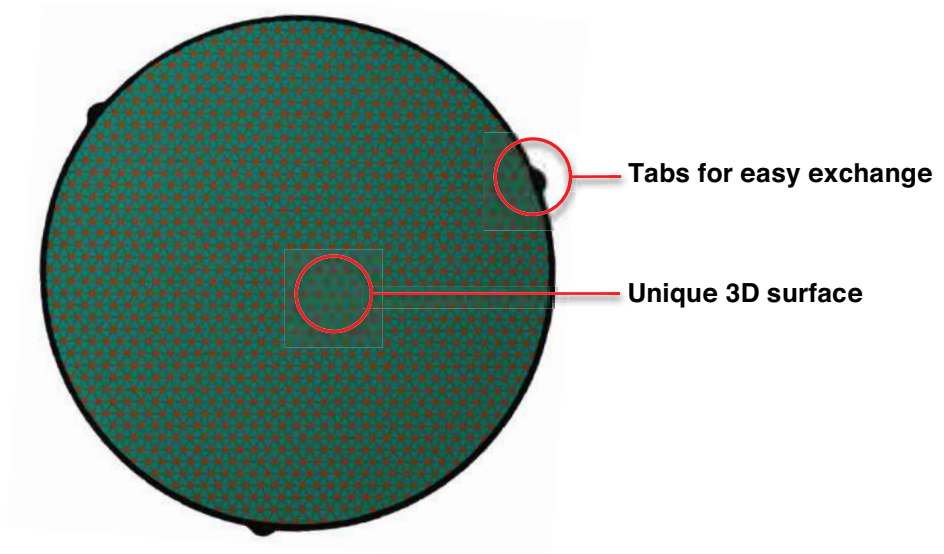
Aka-Rhaco	Aka-Rhaco Flex	Aka-Rhaco PSA
Thin steel disc for use on magnetic support discs	Soft polymer disc containing ferrous particles for use on magnetic support discs	Self-adhesive foil to be glued directly on an aluminium support disc

Aka-Ronan is a steel disc with a 3D-polymer coating. It is used to adapt self-adhesive polishing cloths or other self-adhesive grinding discs for use on magnetic support discs. Remove the liner and attach the self-adhesive to the surface of Aka-Ronan.

Due to the unique 3D surface air pockets are avoided and the polymer surface allows for easy removal of the cloths once they are worn out.

Aka-Ronan can be used over and over again.

Special features of Aka-Ronan:



Aka-Magnet is a polymer-based magnetic foil with PSA backing to convert a standard preparation disc to a magnetic support disc.

As with all polymer-based magnets some maintenance is necessary and eventually the foil will wear. Due to the PSA backing it can then easily be replaced.



Aka-Ronan Use self adhesive cloths in magnetic systems

Product no.	Product name	Contents	GRWT kg
4310	Aka-Ronan, adapter disc with 3D surface ø200 mm	2 pc.	0,46
4320	Aka-Ronan, adapter disc with 3D surface ø250 mm	2 pc.	0,58
4330	Aka-Ronan, adapter disc with 3D surface ø300 mm	2 pc.	0,75

Aka-Rhaco Steel disc for high edge retention

Product no.	Product name	Contents	GRWT kg
4312	Aka-Rhaco, adapter disc with polymer coating ø200 mm	2 pc.	0,49
4322	Aka-Rhaco, adapter disc with polymer coating ø250 mm	2 pc.	0,63
4332	Aka-Rhaco, adapter disc with polymer coating ø300 mm	2 pc.	0,80
4342	Aka-Rhaco, adapter disc with polymer coating ø350 mm	2 pc.	0,99

Aka-Rhaco-Flex Soft polymer magnet for softer polishing

Product no.	Product name	Contents	GRWT kg
4313	Aka-Rhaco Flex, soft adapter disc with polymer coating ø200 mm	2 pc.	0,40
4323	Aka-Rhaco Flex, soft adapter disc with polymer coating ø250 mm	2 pc.	0,45
4333	Aka-Rhaco Flex, soft adapter disc with polymer coating ø300 mm	2 pc.	0,50
4343	Aka-Rhaco Flex, soft adapter disc with polymer coating ø350 mm	2 pc.	0,62

Aka-Rhaco-PSA For gluing directly onto disc

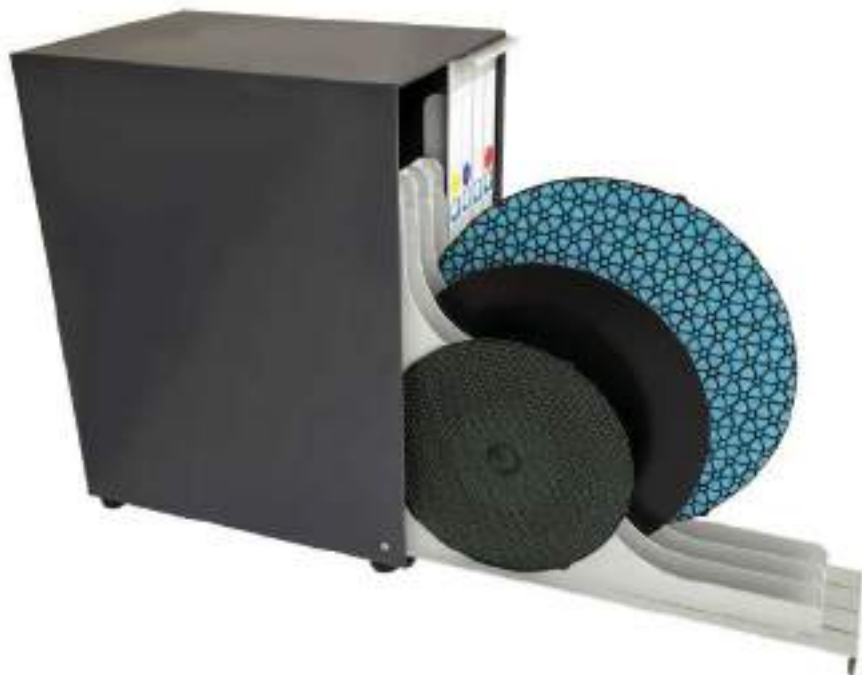
Product no.	Product name	Contents	GRWT kg
4314 NEW	Aka-Rhaco PSA, PSA backed adapter disc with polymer coating ø200 mm	2 pc.	0,28
4317 NEW	Aka-Rhaco PSA, PSA backed adapter disc with polymer coating ø230 mm	2 pc.	0,29
4324 NEW	Aka-Rhaco PSA, PSA backed adapter disc with polymer coating ø250 mm	2 pc.	0,30
4334 NEW	Aka-Rhaco PSA, PSA backed adapter disc with polymer coating ø300 mm	2 pc.	0,34
4344 NEW	Aka-Rhaco PSA, PSA backed adapter disc with polymer coating ø350 mm	2 pc.	0,42

Aka-Magnet		Round self-adhesive polymer magnet		
Product no.	Product name	Contents	GRWT kg	
4315	Aka-Magnet, magnetic foil with PSA backing ø200 mm	1 pc.	0,41	
4325	Aka-Magnet, magnetic foil with PSA backing ø250 mm	1 pc.	0,52	
4335	Aka-Magnet, magnetic foil with PSA backing ø300 mm	1 pc.	0,65	
4345	NEW Aka-Magnet, magnetic foil with PSA backing ø350 mm	1 pc.	0,88	

Accessories



Here you find our range of accessories to help you in your daily preparation work.



Cleaning **Spray for easy cleaning of specimens**

Product no.	Product name	Contents	GRWT kg
10000	Aka-Clean, Spray	0,5 l	0,62
10001	Aka-Clean, Refill	5 l	5,10

Cleaning **Water-free, Non-hazardous alternative to Ethanol**

Product no.	Product name	Contents	GRWT kg
10002	Aka-Clean Water-free, Spray	0,5 l	0,62
10003	Aka-Clean Water-free, Refill	5 l	5,24

Bottles **Spray bottle for reproduceable dosing of liquids**

Product no.	Product name	Contents	GRWT kg
10007	Spray trigger for use with 250, 500 and 1000 ml PET bottles.	5 pc.	0,13
10010	Trigger Spray Bottle 250 ml PET	3 pc.	0,20
10015	Trigger Spray Bottle 500 ml PET	3 pc.	0,20

Dressing stick **For dressing of Aka-Piatto and Aka-Allegran**

Product no.	Product name	Contents	GRWT kg
10020	Dressing Stick #220 25 x 25 x 150 mm	1 pc.	0,20

Disc Cabinet **Disc Cabinet for 16 discs**

Product no.	Product name	Contents	GRWT kg
2141000 NEW	Disc Cabinet. For storing 16 x ø200 - 300 mm steel discs	1 pc.	13,00

This price list supersedes all previous price lists.

Pricing

Prices are ex. Vat. and subject to change without notice.

Delivery

EXW Incoterms

Payment

30 days net. from day of shipment.

Terms

Please see our full Terms at www.akasel.com or inquire at info@akasel.com

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