

Cloeren Technology GmbH

***Preparation systems
and
Materialography - Supplies***

***PrcXi WhList
2013***

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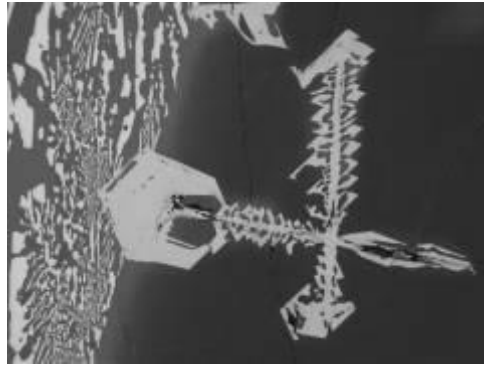
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- **Your contact for optimal materialographic sample preparation!**



A word about us:

After many years experience in the field of laboratory management and material technology we want to pass on our knowledge to you and offer services and products in the field of Materialography. Please do not hesitate to contact us. We are happy to answer all questions about materialgraphic sample preparation.

Our offer:

Damage Analysis

Contract Materialography

Training

Consumables for materialographic sample preparation

Development of new materialographic products

Support during the establishment of new labs

Hardware and software for digital image processing

In our lab we can become active for you in the field of **Damage Analysis** and **Contract Materialography**.

Through our comprehensive on-site or in-house **individual training** you have the possibility to expand and consolidate your knowledge in the field of materialographic sample preparation. We can also provide optimal solutions for problems.

Peruse our Web-shop where our range is continuously updated. There you will also find products that are not yet included in this price list.

Please feel free to contact us by phone 02432/8902510, by fax 02432/8902519 or by E-Mail: h.h.cloeren@cloeren.de

All the information in this price list cannot be guaranteed, in-between sales of the products reserved. We reserve the right to change prices and products at any time. All prices are shown in EUROS, plus the appropriate rate of value-added tax.

Perfection in materialographic sample preparation!

Our preparation laboratory develops the optimal sample preparation for your materials testing, please send us your samples with a brief description of your problem and we work out for free * a preparation concept.

* Free preparations without evaluation of the microstructure and other material properties.

Materialographic Training

Examples of training programs:

1. Materialography - Grain texture representation and interpretation

2. Materialographic sample preparation - from the material test up to the final polish

The training includes a theoretical and a practical part. We need information about all available devices and materials for a practical training course. The training courses are designed according to your individual requirements and can be arranged in a way that it meets your wishes and needs.

Every participant receives the required working documentation and on course completion a certificate of participation.

We will gladly submit a detailed non-mandatory training quote, just give us a call.



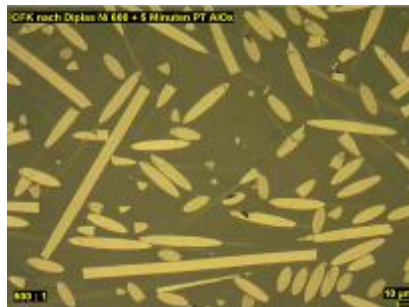
Damage Analysis and Contract Materialography



1. Production of macro and micro cuts
2. Grain texture investigation and evaluation
3. Photographic documentation
4. Production of materialographic cut tests and development of the preparation steps with recommendation of the consumption materials to be used.
5. Test preparation for the microscopic evaluation and documentation on a digital picture display system.

If you would want to place an order for a Materialographic sample preparation with us, please just contact us.

The price of the preparation depends on the costs incurred. If you require we can provide you a more detailed quote.

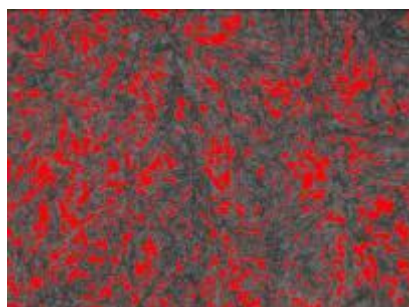
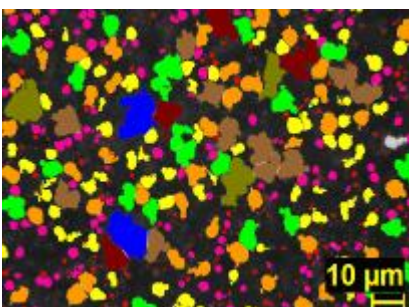


Micro hardness test

Picture analysis: Grain size, layer thicknesses, particle count, pore analysis

REM - Investigations with microprobe investigation

Mobile component examination



Preparation machines

Wet Cut-off machine

CT CUT M 300 **Manual Wet Cut-off machine**

Technical specifications and accessories:

- Wet cut-off grinding wheel size: Ø 250 mm or Ø 300 mm
- Flat engine allows plenty of room for cutting larger components
- with Ø 250 mm cutting wheel you can cut-off samples up to 90 mm
- with Ø 300 mm cutting wheel you can cut-off samples up to 110 mm
- Large separation space and cut-off table: 480 mm x 290 mm
- Well illuminated inside space
- Ergonomic separating lever
- High engine power 3.7 KW, three-phase 400V/50Hz 2800 r / min.
- Cut-off motor with Class F thermal insulation up to 150 ° C
- Large viewing window made of durable plastic
- Motor load display
- Electronic motor brake
- Hood latch cannot be opened in workflow
- Powerful cooling system 60 l
- Automatic destruction of germs and bacteria by a UV filter system
- Automatic removal of magnetic particles from the cooling water
- Easy cleaning
- Including a tensioning means (vertical clamps big 1.6 t)

Other tensioning means must be ordered separately

Warm mounting press

CT ThermoPress 10 **Automatic electro-hydraulic Warm mounting press**

Technical specifications and accessories:

- Mounting units in Ø 25 mm, 30 mm, 40 mm, 50 mm and square designs
- Super fast heating and cooling (4-6 minutes)
- Programmable water cooling and additional air cooling adjustable
- LED display for the progress of work
- Electro-hydraulic system
- Installed programs for the various warm embedding materials
- Own programming of warm embedding programs
- Easy operation by touch panel
- Simple tool change
- Reliable closure system
- Connection of an external cooling system possible (CT Mini Chiller)
- Including accessories (hoses, funnels, cleaning brush and more.)

Prices and more information about the machines on request!

Grinding- and polishing machines

CT UniPol

One- or two-spindle Grinding- and polishing machine



Technical specifications and accessories:

- Optionally one- or two-spindle
- Working-wheel magnet-coated in either Ø 200 mm, Ø 250 mm or Ø 300 mm
- Stable splash-guard ring
- Water inflow and -outflow
- Available with or without touch-control panel
- Automatic water on / off function
- with cover
- Rotation speed 50 to 600 r / min. continuously adjustable, Mono Phase 200 V ~ 240 V
- Water inflow can be removed from the casing, so the interior can be better cleaned by grinding and polishing abrasive

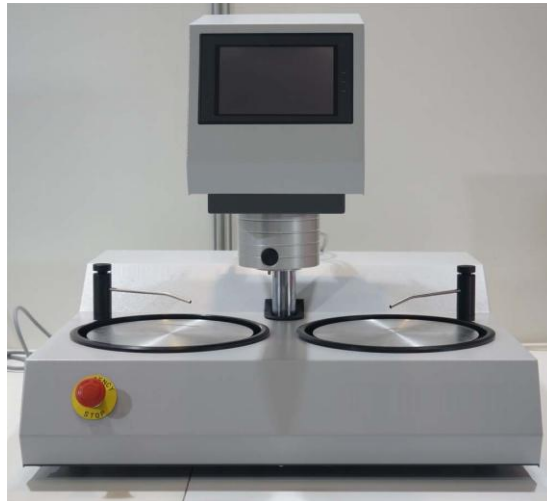
For the version with touch panel:

- Automatic pressure display during manual grinding and polishing
- Preparation methods are available and can as well even be created

Prices and more information about the machines on request!

CT MegaPol

One- or two-spindle semi-automatic Grinding- and polishing machine with specimen mover



Technical specifications and accessories:

- Optionally one- or two-spindle
- Working-wheel magnet-coated in either Ø 200 mm, Ø 250 mm or Ø 300 mm
- Stable splash-guard ring
- Water inflow and -outflow
- Touch Control Panel
- with cover
- Rotation speed 50 to 600 r / min. continuously adjustable, Mono Phase 200 V ~ 240 V
- Specimen holder head rotating speed: 50 - 140 r / min.
- Changeable direction (same direction or reverse rotation)
- Pressure of each sample 10-50 N adjustable
- Automatic water on / off function
- Preparation methods are available and can as well even be created.
- Manual sample preparation possible
- Water inflow can be removed from the casing, so the interior can be better cleaned by grinding and polishing abrasive
- Electrostatic powder coating
- LED display for the progress of work
- Upgradeable software
- Specimen holder for single pressure, size of your choice, one piece including!
- CT Doser dosing unit with 4 independent pumps and time- and volume adjustment including!

Prices and more information about the machines on request!

Wet cut-off grinding wheels with high cutting quality

Top quality, high durability, best price/performance ratio

Fabric strengthened for materials 150 to 700 HV

Cut023	Cutting disc	Ø 254 x 1,7 x 32 mm
Cut037	Cutting disc	Ø 305 x 2,2 x 32 mm
Cut038	Cutting disc	Ø 356 x 3,0 x 32 mm
Cut039	Cutting disc	Ø 406 x 3,2 x 32 mm

Non-strengthened for materials of medium hardness 150 to 700 HV

Cut029	Cutting disc	Ø 254 x 1,6 x 32 mm
Cut030	Cutting disc	Ø 305 x 1,8 x 32 mm
Cut024	Cutting disc	Ø 350 x 2,5 x 32 mm
Cut032	Cutting disc	Ø 406 x 3,2 x 32 mm

High Quality Premium Cutting Wheels

Non-strengthened for materials of medium hardness 150 to 700 HV

Cut049	Cutting disc	Ø 254 x 1,6 x 32 mm
Cut050	Cutting disc	Ø 305 x 1,8 x 32 mm
Cut051	Cutting disc	Ø 350 x 2,5 x 32 mm
Cut052	Cutting disc	Ø 406 x 3,2 x 32 mm

Non-strengthened for materials of high hardness 500 to 1000 HV

Cut033	Cutting disc	Ø 254 x 1,5 x 32 mm
Cut034	Cutting disc	Ø 305 x 1,8 x 32 mm
Cut025	Cutting disc	Ø 350 x 2,5 x 32 mm
Cut036	Cutting disc	Ø 406 x 3,2 x 32 mm

High Quality Premium Cutting Wheels

Non-strengthened for materials of high hardness 500 to 1000 HV

Cut053	Cutting disc	Ø 254 x 1,6 x 32 mm
Cut054	Cutting disc	Ø 305 x 1,8 x 32 mm
Cut055	Cutting disc	Ø 350 x 2,5 x 32 mm
Cut056	Cutting disc	Ø 406 x 3,2 x 32 mm

For Titan, non-ferrous metals and plastics

Cut057	Cutting disc	Ø 250 x 1,7 x 32 mm
Cut041	Cutting disc	Ø 300 x 2,0 x 32 mm
Cut042	Cutting disc	Ø 350 x 2,5 x 32 mm
Cut043	Cutting disc	Ø 400 x 3,0 x 32 mm

Fabric Strengthened for surface-hardened steels, inductive and case hardening steels

Cut058	Cutting disc	Ø 250 x 1,7 x 32 mm
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Other dimensions on request!

New !

Precision cutting wheels

Corundum cutting wheels resin bound (pack of 5 pieces)

PCut001	Ø 150 x 0,5 x 12,7 mm for soft iron materials hardness < 35 HRC
PCut002	Ø 200 x 0,8 x 12,7 mm for soft iron materials hardness < 35 HRC
PCut003	Ø 150 x 0,5 x 12,7 mm for medium-hard iron materials hardness 35 – 60 HRC
PCut004	Ø 200 x 0,8 x 12,7 mm for medium-hard iron materials hardness 35 – 60 HRC
PCut005	Ø 150 x 0,5 x 12,7 mm for hard iron materials hardness > 60 HRC
PCut006	Ø 200 x 0,8 x 12,7 mm for hard iron materials hardness > 60 HRC
PCut007	Ø 150 x 0,5 x 12,7 mm for NE-metals, Titan und plastics
PCut008	Ø 200 x 0,8 x 12,7 mm for NE-metals, Titan und plastics

Diamond- and CBN- cutting wheels

Diamond cutting discs, metal bound, for ceramics and minerals, 5 mm high coating

DiaCut001	Ø 75 x 0,18 x 12,7 mm
DiaCut003	Ø 100 x 0,35 x 12,7 mm
DiaCut005	Ø 125 x 0,35 x 12,7 mm
DiaCut006	Ø 125 x 0,40 x 12,7 mm
DiaCut008	Ø 150 x 0,45 x 12,7 mm
DiaCut011	Ø 200 x 0,60 x 22,0 mm

Diamond cutting discs, metal bound, for hard metals and brittle materials

DiaCut002	Ø 75 x 0,20 x 12,7 mm coating height	5,0 mm
DiaCut004	Ø 100 x 0,30 x 12,7 mm coating height	5,0 mm
DiaCut007	Ø 125 x 0,50 x 12,7 mm coating height	5,0 mm
DiaCut009	Ø 150 x 0,40 x 12,7 mm coating height	5,0 mm
DiaCut010	Ø 150 x 0,75 x 12,7 mm coating height	5,0 mm
DiaCut012	Ø 200 x 0,60 x 22,0 mm coating height	5,0 mm
DiaCut028	Ø 200 x 1,50 x 12,7 mm coating height	10,0 mm
DiaCut013	Ø 250 x 1,50 x 32,0 mm coating height	10,0 mm
DiaCut015	Ø 300 x 2,00 x 32,0 mm coating height	10,0 mm
DiaCut017	Ø 350 x 1,60 x 32,0 mm coating height	5,0 mm
DiaCut019	Ø 400 x 2,00 x 32,0 mm coating height	6,5 mm
DiaCut021	Ø 450 x 2,50 x 32,0 mm coating height	9,0 mm

Diamond cutting discs Bakelite bound for ceramic, hard metals and minerals

DiaCut027	Ø 125 x 0,60 x 12,7 mm coating height	5,0 mm
DiaCut026	Ø 150 x 0,60 x 12,7 mm coating height	5,0 mm
DiaCut025	Ø 150 x 1,00 x 12,7 mm coating height	5,0 mm
DiaCut014	Ø 250 x 1,50 x 32,0 mm coating height	5,0 mm
DiaCut016	Ø 300 x 1,80 x 32,0 mm coating height	9,0 mm
DiaCut018	Ø 350 x 1,80 x 32,0 mm coating height	9,0 mm
DiaCut020	Ø 400 x 1,80 x 32,0 mm coating height	8,0 mm

**Diamond cutting discs with coarse diamond grain, nickel bound
Application such as embedded samples in plastic**

DiaCut023	Ø 125 x 1,5 x 12,7 mm (Thickness of steel blank 0.5 mm)
DiaCut022	Ø 150 x 1,5 x 12,7 mm (Thickness of steel blank 1,0 mm)
DiaCut024	Ø 200 x 1,8 x 12,7 mm (Thickness of steel blank 1,2 mm)

CBN-cutting discs Bakelite bound for hard and ductile steels

CBNCut001	Ø 125 x 0,60 x 12,7 mm coating height	5,0 mm
CBNCut002	Ø 150 x 0,80 x 12,7 mm coating height	5,0 mm
CBNCut003	Ø 250 x 1,20 x 32,0 mm coating height	7,0 mm
CBNCut004	Ø 300 x 1,80 x 32,0 mm coating height	9,0 mm
CBNCut005	Ø 350 x 1,80 x 32,0 mm coating height	9,0 mm
CBNCut006	Ø 400 x 2,00 x 32,0 mm coating height	9,0 mm
CBNCut007	Ø 450 x 2,10 x 32,0 mm coating height	9,0 mm

Special sizes on request!**Delivery time: 3-4 weeks or on request!****Corundum sharpening stone**

AZS001 **Sharpening stone** for free-cutting of diamond grinding discs
(DIPLAS, PIATTO, or other) and diamond cutting discs

Corrosion protection coolant – CUTLUB

Newly developed special heat- and corrosion protection agent for all types of cutting machines

Mixing ratio: 1: 30

CUTLUB is a water-soluble, mineral oil-free cutting fluid of the amine- and boric acid-free generation. This offers high technical capacity and the best possible industrial safety and protection for your personnel.

CUTLUB is a special product for the separation of hard metal materials, steel- and cast qualities, coloured metals and non-ferrous materials. **CUTLUB** prevents the absorption of cobalt ions in grinding and/or decollating solutions and with that also their burning. The protection of the workers is improved by that significantly.

CUTLUB - Corrosion protection coolant mineral oil-free

CUTLUB001	1 liter – bundle
CUTLUB002	5 liter – bundle
CUTLUB003	10 liter – bundle

CUTLUB - Corrosion protection coolant mineral oil-based on request!

Warm Embedding Materials

Embedding-parameter of Warm Embedding Materials

Ø	Embedding Material			Heating			Cooling	
25 mm	Product	Quantity		Time	Temp.	Strength	Time	Speed
		[Scoop] ¹	[ml]	[min]	[°C]	[kN]	[min]	
	WEM EPOXY	1	15	3 - 5	150 - 180	15	2 - 3	Fast
	WEM DAP	1	15	3 1/2 - 5	150 - 180	15	2 - 3	Fast
	WEM KLAR	1	15	3 1/2 - 5	150 - 180	15	6 - 8	Slow
	WEM UNI	1	15	3 1/2 - 5	150 - 180	15	6 - 8	Slow
	WEM REM	1	15	4 - 5	150 - 180	15	2 - 3	Fast
	WEM PHENOL	1 1/2	23	3 1/2 - 5	150 - 180	15	2 - 3	Fast
Ø	Embedding Material			Heating			Cooling	
30 mm	Product	Quantity		Time	Temp.	Strength	Time	Speed
		[Scoop] ¹	[ml]	[min]	[°C]	[kN]	[min]	
	WEM EPOXY	1 1/2	23	4 - 6	150 - 180	20	2 - 3	Fast
	WEM DAP	1 1/2	23	4 - 6	150 - 180	20	2 - 3	Fast
	WEM KLAR	1 1/2	23	4 - 6	150 - 180	20	6 - 8	Slow
	WEM UNI	1 1/2	23	4 - 6	150 - 180	20	6 - 8	Slow
	WEM REM	1 1/2	23	4 - 6	150 - 180	20	2 - 3	Fast
	WEM PHENOL	2	30	4 - 6	150 - 180	20	2 - 3	Fast
Ø	Embedding Material			Heating			Cooling	
40 mm	Product	Quantity		Time	Temp.	Strength	Time	Speed
		[Scoop] ¹	[ml]	[min]	[°C]	[kN]	[min]	
	WEM EPOXY	3	45	5 - 7	150 - 180	30	2 - 4	Fast
	WEM DAP	2 1/2	38	5 - 7	150 - 180	30	2 - 4	Fast
	WEM KLAR	2	30	4 1/2 - 7	150 - 180	30	7 - 10	Slow
	WEM UNI	3	45	4 1/2 - 7	150 - 180	30	7 - 10	Slow
	WEM REM	2 1/2	38	5 1/2 - 7	150 - 180	30	2 - 4	Fast
	WEM PHENOL	3	45	5 - 7	150 - 180	30	2 - 4	Fast
Ø	Embedding Material			Heating			Cooling	
50 mm	Product	Quantity		Time	Temp.	Strength	Time	Speed
		[Scoop] ¹	[ml]	[min]	[°C]	[kN]	[min]	
	WEM EPOXY	5	75	6 - 8	150 - 180	50	2 - 4	Fast
	WEM DAP	4	60	7 - 9	150 - 180	50	2 - 4	Fast
	WEM KLAR	3	45	6 - 8	150 - 180	50	9 - 12	Slow
	WEM UNI	4	60	6 - 8	150 - 180	50	9 - 12	Slow
	WEM REM	4	60	6 - 8	150 - 180	50	2 - 4	Fast
	WEM PHENOL	5	75	7 - 9	150 - 180	50	2 - 4	Fast

1) à 15 ml

Warm Embedding Materials

WEM EPOXY

Warm embedding material on epoxy resin basis; black with mineral filling materials.

Good adhesiveness at the test surface, optimal edge clearance, when warm embedding it becomes watery, so that it also partly penetrates into the porous sample surface.

WEM001	WEM EPOXY	1,0 kg bundle
WEM002	WEM EPOXY	7,5 kg bundle
WEM021	WEM EPOXY	22,5 kg bundle (3 x 7.5 kg - in the bucket)

WEM DAP

Warm embedding material on Diallylphtalat basis, blue with glass fibres

WEM003	WEM DAP	1,0 kg bundle
WEM004	WEM DAP	7,5 kg bundle
WEM022	WEM DAP	22,5 kg bundle (3 x 7.5 kg - in the bucket)

WEM UNI (white/grey)

Universal inorganically filled glass fibre reinforced warm embedding material.

Good adhesiveness at the test surface, optimal edge clearance, when warm embedding it becomes watery, so that it also partly penetrates into the porous sample surface.

Chemical resistant

WEM008	WEM UNI (white/grey)	1,0 kg bundle
WEM009	WEM UNI (white/grey)	7,5 kg bundle
WEM023	WEM UNI (white/grey)	22,5 kg bundle (3 x 7.5 kg - in the bucket)

WEM Clear

Thermoplastic transparent warm embedding material

Optimal transparency, good adhesiveness to the sample surface

Chemical resistant

WEM012	WEM Clear	1,0 kg bundle
WEM013	WEM Clear	7,5 kg bundle
WEM014	WEM Clear	22,5 kg bundle (3 x 7.5 kg - in the bucket)

WEM REM

Warm embedding material with excellent electrical conductive properties, therefore very suitable for investigations in REM; voltage loss almost completely eliminated

Filling material: Graphite

WEM010	WEM REM	1,0 kg bundle
WEM011	WEM REM	7,5 kg bundle
WEM024	WEM REM	22,5 kg bundle (3 x 7.5 kg - in the bucket)

WEM Phenol

Warm embedding material on phenol resin basis, black with wood flour as filling material

WEM005	WEM Phenol	2,5 kg bundle
WEM006	WEM Phenol	7,0 kg bundle
WEM019	WEM Phenol	21,0 kg bundle (3 x 7 kg - in the bucket)
WEM020	WEM Phenol	35,0 kg bundle (3 x 7 kg - in the bucket)

Preforms upon request, Mould release agent TrenM see page 23!

Cold Embedding Materials

- CEM001 CEM1000 Blue Set**
 2-component embedding materials based on high cross-linked Methylmethacrylate.
 Set consisting of 1000 g powder, 500 ml hardening fluid, 25 mixing pots and 50 wooden spatulas.
 Universal cold embedding material with mineral filling material
 Mixture ratio: 2 parts volume powder, 1 part volume hardening fluid
 Processing time: 3 - 5 minutes
 Hardening-time at room temperature: 12 - 15 minutes
 Polymerization temperature: 92-98°C
- CEM056 CEM1000 Blue Set, Methylmethacrylate-free**
 2-component embedding materials, hardening fluid Methylmethacrylate-free
Improved version, no dangerous goods, less air bubble inclusions, neutral smell
 Set consisting of 1000 g powder, 500 ml hardening fluid, 25 mixing pots and 50 wooden spatulas.
 Universal cold embedding material with mineral filling material
 Mixture ratio: 2 parts volume powder, 1 part volume hardening fluid
 Processing time: 3 - 5 minutes
 Hardening-time at room temperature: 7 - 8 minutes
 Polymerization temperature: 92-98°C
- CEM002 CEM1000 Blue powder 1000 g**
 Powder for 2-component embedding material CEM 1000 blue
- CEM003 CEM1000 Blue Hardening fluid 500 ml**
 Hardening fluid for 2-component embedding material CEM 1000 blue, based on high cross-linked Methylmethacrylate.
- CEM055 CEM1000 Blue Hardening fluid 500 ml**
 Hardening fluid for 2-component emb. material, **Methylmethacrylate-free**
 Improved version:
 No dangerous goods, less air bubble inclusions, neutral smell
- CEM033 CEM1000 Blue Jumbo pack**
 2-component embedding material based on high cross-linked Methylmethacrylate.
 Jumbo pack consisting of 3000 g powder and 1500 ml hardening fluid
- CEM057 CEM1000 Blue Jumbo pack– Hardening fluid, Methylmethacrylate-free**
 2-component embedding material, hardening fluid, Methylmethacrylate-free
 Improved version:
 No dangerous goods, less air bubble inclusions, neutral smell
 Jumbo pack consisting of 3000 g powder and 1500 ml hardening fluid
- CEM034 CEM1000 Blue powder 5 kg**
 Powder for 2-component embedding material CEM 1000 blue
- CEM051 CEM1000 Blue powder 10 kg**
 Powder for 2-component embedding material CEM 1000 blue

CEM021	<p>CEM2000 TRIFIX Set 3-component embedding material based on modified polyester in the form of powder, Sirup I and Sirup II. CEM2000 TRIFIX properties display very low shrinking and excellent edge connection. Colour whitish opaque. Set consisting of 1500 g powder, 1000 ml Syrup I, 500 ml Syrup II, 25 mixing pots and 50 mixing spatulas. Universal cold embedding agent with mineral filling material. Mixture ratio: 3 parts volume powder, 2 parts volume syrup I, 1 part volume Sirup II. Mix the Syrup I and II first, then add the powder Processing time: 3 - 5 minutes Hardening-time at room temperature: 8 - 10 minutes Hardness: 85-87 Shore D Polymerization temperature: 92-98°C</p>
CEM038	<p>CEM2000 TRIFIX Jumbo pack 3-component embedding material based on modified polyester in the form of powder, Sirup I und Sirup II. Jumbo pack consisting of 6 kg powder, 4 liter Syrup I, 2 liter Syrup II</p>
CEM022	<p>CEM3000+ Set 2-component embedding material based on modified polyester resin which, due to its special properties expands and no longer shrinks. Hardening fluid keep cool (not above 20°C)! Set consisting of 1000 g powder, 500 ml hardening fluid, 25 mixing pots and 50 mixing spatulas Mixture ratio: 2 parts volume powder, 1 parts volume hardening fluid Processing time: 2 - 3 minutes Hardening-time at room temperature: 20 - 25 minutes Hardness: 85-87 Shore D Polymerization temperature: 92-98°C</p>
CEM023	<p>CEM3000+ Powder 1 kg Powder for 2-component embedding material based on modified polyester resin.</p>
CEM024	<p>CEM3000+ Hardening fluid 500 ml Hardening fluid for 2-component embedding material based on modified polyester resin. Keep cool (not above 20°C)!</p>
CEM025	<p>CEM3000+ Powder 5 kg Powder for 2-component embedding material based on modified polyester resin.</p>
CEM027	<p>CEM3000+ Powder 10 kg Powder for 2-component embedding material based on modified polyester resin.</p>

CEM029	CEM3020 Set A clear – transparent 2-component - cold embedding material with very good adhesion and new environmentally friendly hardening system. During the curing under pressure (for example in the pressure pot) you get crystal-clear embeddings. Little blistering also without pressure pot! Set consisting of 1000 g powder, 500 ml hardening fluid, 25 mixing pots and 50 wooden spatulas Mixture ratio: 2 parts volume powder, 1 part volume hardening fluid Processing time: 3 - 4 minutes Hardening-time at room temperature: 20 - 25 minutes Hardness: 85-87 Shore D Polymerization temperature: 85 - 89°C
CEM030	CEM3020 Powder 1000 g Powder for clear – transparent 2-component embedding material
CEM031	CEM3020 Hardening fluid 500 ml Hardening fluid for clear – transparent 2-component embedding material
CEM039	CEM3020 Powder 5 kg Powder for clear – transparent 2-component embedding material
CEM036	CEM3020 Powder 10 kg Powder for clear – transparent 2-component embedding material
Zub015	Pressure pot 4 l To blow- and pore-free curing of CEM3020, Compressed-air connection(2 bar) or compressor required Dimensions: Ø 195 mm, height: 185 mm, including 2 m filling hose
CEM048	CEM3070 electrically conducting Set An electrically conducting 2 - Components - cold embedding material Very well suitable for raster-electron investigations. Excellent adhesion and very good electrical conductivity by mixed nanoparticles of graphite. Set consisting of 1000 g powder, 500 ml hardening fluid, 25 mixing pots and 50 wooden spatulas Mixture ratio: 8 parts volume powder, 5 part volume hardening fluid Processing time: 3 - 4 minutes Hardening-time at room temperature: 7 - 8 minutes Hardness: 85-87 Shore D Polymerization temperature: 85 - 89°C
CEM049	CEM3070 electrically conducting Powder 1000 g
CEM050	CEM3070 electrically conducting Hardening fluid 500 ml
CEM008	CEM4000 Lightfix Light hardened one-component embedding material of highest translucency based on Methacrylate, 1 l CEM4000 Lightfix hardens with blue light (wavelength 400 nm to 500 nm). With our product, layer thicknesses of 20 mm can be hardened without difficulty in one step. After the polymerisation built-up inhibition layers on the surface can be wiped away very simply with a cloth impregnated in alcohol. Thereafter, a crystal-clear test specimen is formed. One does not need any additional masking lacquer! Gap width: max. 20 µm Linear shrinkage: max. 0,25 % Hardness: at least 80 Shore - D, is already achieved after a single exposure time of 9 minutes.

CEM041	CEM4001 Lightfix fixing paste Light hardened one-component fixing-paste of highest translucency based on Methacrylate, 5 g syringe
CEM042	CEM4001 Lightfix fixing paste Light hardened one-component fixing-paste of highest translucency based on Methacrylate, 80g tin
CEM013	CEM9000 very thin fluid (very good qualified for mass of embeddings) CEM 9000 is a high quality, nearly odorless 2-component Polyurethane casting compound without filling material. Properties: <ul style="list-style-type: none"> • very thin fluid • good through hardening • very high hardness • good heat resistance • excellent chemical resistance • very low curing temperature • ideal for materialographic sample preparation Color of resin: component A white (1kg) Color Hardener: component B light yellow (1kg) Mixture ratio: 1: 1, Pot time: 3 - 5 minutes Hardening-time at room temperature: 15 - 25 minutes Hardening temperature: 18 - 25 ° C Hardness: 70 - 75 Shore D, viscosity of the mixture: 40 – 60 mPas Linear shrinkage: 0,15 – 0,20 % Larger bundle on request!

Epoxy resins

Epoxy 1000

Technical details of Epoxy 1000:

Colour: crystal-clear
 Mixture ratio: 100 : 19-20
 Processing time: 20 minutes
 Hardening time: 6 - 8 hrs
 Heat strength: approx. 85°C

Viscosity: Mixture 600 - 700 (mPas)
 Refractive index: Resin 1,543
 Hardener: 1,520
 Storage: closed at 15°C
 12 months
 Hardness: 70 – 80 Shore D at 20°C

Epoxy001	Epoxy 1000 Plus Epoxy resin, low splitting & shrinkage, thin fluid and free of filling material Set consisting of 1000g resin, 200 g hardener, 25 mixing pots and 50 mixing spatulas
Epoxy002	Epoxy 1000 Resin Resin 1000 g for epoxy resin system Epoxy 1000 Plus
Epoxy003	Epoxy 1000 Hardener Hardener 200 g for epoxy resin system Epoxy 1000 Plus
Epoxy004	Epoxy 1000 Resin Resin 5000 g for epoxy resin system Epoxy 1000 Plus
Epoxy005	Epoxy 1000 Hardener Hardener 1000 g for epoxy resin system Epoxy 1000 Plus

Epoxy 2000

Technical details of Epoxy 2000:

Colour: crystal-clear
 Mixture ratio: 100 : 48
 Processing time: 45 minutes
 Hardening time: 14 - 16 hrs
 Heat strength: approx. 85°C

Viscosity: Resin 400 (mPas)
 Hardener: 200 (mPas)
 mixed 201 +- 50 (mPas)
 Refractive index: Resin 1,543
 Hardener: 1,520
 Storage: closed at 15°C
 12 months

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| Epoxy006 | Epoxy 2000 Plus
Epoxy resin, high translucence, low splitting & shrinkage, thin fluid, free of solvents and filling material. Set consisting of 1000 g resin, 480 g hardener, 25 mixing pots and 50 mixing spatulas |
| Epoxy007 | Epoxy 2000 Resin
Resin 1000 g for epoxy resin system Epoxy 2000 Plus |
| Epoxy008 | Epoxy 2000 Hardener
Hardener 480g for epoxy resin system Epoxy 2000 Plus |
| Epoxy009 | Epoxy 2000 Resin
Resin 5000 g for epoxy resin system Epoxy 2000 Plus |
| Epoxy010 | Epoxy 2000 Hardener
Hardener 2400 g for epoxy resin system Epoxy 2000 Plus |

New!

Aka-Resin

New!
Technical details of Aka-Resin:

Colour: almost crystal-clear
 Mixture ratio: 100 : 13
 Processing time: 45 minutes

Hardening time: 8-12 hrs
 Heat strength: approx. 85°C
 Storage: closed at 15°C: 12 months

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|----------|---|
| Epoxy018 | Aka-Resin
Epoxy resin, transparent, low splitting & shrinkage, thin fluid very low viscosity
Resin 1000 ml |
| Epoxy019 | Hardener for Aka-Resin
Hardener 250 ml for Epoxy resin Aka-Resin |
| Epoxy020 | Aka-Resin
Resin 5000 ml |

Epoxy 3000 Quick

Technical details of Epoxy 3000 Quick:

Colour: yellowish transparent
 Mixture ratio 2 : 1 parts by weight
 1,7 : 1 parts by volume
 Pot life (+ 20 ° C): 100 minutes
 Hardening time at 80 °C: 30 minutes
 suitable for vacuum infiltration

Viscosity: Mixture 600-700 (mPas)
 Refractive index: Resin 1,544
 Hardener: 1,521
 Storage: closed at 15°C
 12 months
 Hardness: 70 – 80 Shore D at 20°C

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|----------|--|
| Epoxy015 | Epoxy 3000 Quick 1 kg Set
Epoxy resin with low viscosity, transparent, low shrinkage,
Hardening time at 80 °C: 30 minutes, suitable for vacuum infiltration
Set consisting of 667 g resin, 333 g hardener, 25 mixing pots and 50 mixing spatulas |
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Dyeing agent for epoxy resins

Epocloer – Dyeing agent for epoxy resins

Epoxy - Coloured paste red, blue, yellow, green and black in 50 g tin

Pigment paste to the permanent dyeing of epoxy resins

Higher pigment content, easily mixable, light strong, softening agent free, cadmium & lead free.

During dark field viewing optimal reproduction of the colour pigments, allowing the viewing of cracks and pores.

Mixing ratio of 1 - 10 %

The colour pastes contain an epoxy resin as binding agent; therefore the addition takes place to be dyed resin component.

Epocloer001	Epocloer Red	Epoxyd - Colour paste red	50 g tin
Epocloer002	Epocloer Blue	Epoxyd - Colour paste blue	50 g tin
Epocloer003	Epocloer Yellow	Epoxyd - Colour paste yellow	50 g tin
Epocloer004	Epocloer Green	Epoxyd - Colour paste green	50 g tin
Epocloer005	Epocloer Black	Epoxyd - Colour paste black	50 g tin

Pigmented Epoxy Resin

Epocloer 011 **Epocloer 3000 Plus**
Epoxy resin, low splitting & shrinkage
thin fluid, free of solvents and directly mixed
with a filling material.
Visualization of the embedding agent in the
macro- and microscopy (bright field, dark
field, polarization and fluorescence)
Set consisting of 1000 g resin, 200 g hardener,
25 mixing pots und 50 mixing spatulas.



Epocloer 012 **Epocloer 3000 Resin 1000 g**

Epocloer 013 **Epocloer 3000 Hardener 200 g**

Epocloer 006 **Epocloer 4000 Pigment powder**
Pigment powder 50 g, for mixing into epoxy resins.
Visualization of pores, cracks & other defects.
Dosage: mix approx. 1 g to 2 g into approx.100 g resin

EpoFluor 001 **EpoFluor Yellow Pigment powder**
Fluorescent colour pigment powder for mixing into
epoxy resin, yellow, 50 g tin
Visualization of pores, cracks & other defects.
Dosage: mix approx. 1 g to 2 g into approx.100 g resin

EpoFluor 002 **EpoFluor Blue Pigment powder**
Fluorescent colour pigment powder for mixing into
epoxy resin, blue, 50 g tin
Visualization of pores, cracks & other defects.
Dosage: mix approx. 1 g to 2 g into approx.100 g resin



Embedding Moulds and accessories for cold Embedding

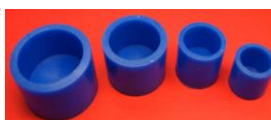
Newly developed embedding moulds, blue made of POM (polyoxymethylene) or transparent made of PP (polypropylene), reusable (metric)

KEF016	Embedding mould Ø 25 mm, blue	3 pieces
KEF017	Embedding mould Ø 30 mm, blue	3 pieces
KEF018	Embedding mould Ø 40 mm, blue	3 pieces
KEF019	Embedding mould Ø 50 mm, blue	3 pieces
KEF020	Embedding mould Ø 25 mm, transparent	3 pieces
KEF021	Embedding mould Ø 30 mm, transparent	3 pieces
KEF022	Embedding mould Ø 40 mm, transparent	3 pieces
KEF023	Embedding mould Ø 50 mm, transparent	3 pieces

Embedding moulds made of silicone rubber

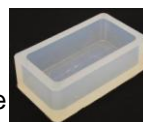
Embedding moulds made of silicone rubber, reusable, colour light blue

KEF004	Embedding mould Ø 25 mm, height 25 mm	1 piece
KEF005	Embedding mould Ø 30 mm, height 25 mm	1 piece
KEF006	Embedding mould Ø 40 mm, height 30 mm	1 piece
KEF007	Embedding mould Ø 50 mm, height 30 mm	1 piece
KEF008	Embedding mould Ø 60 mm, height 35 mm	1 piece
KEF009	Embedding mould □ 55 x 30 x 25 mm	1 piece
KEF010	Embedding mould □ 70 x 40 x 25 mm	1 piece
KEF011	Embedding mould □ 100 x 50 x 25 mm	1 piece



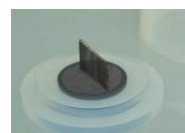
Embedding moulds made of silicone rubber, reusable, colour transparent, hardness 43 Shore A
High resistance to casting resins, particularly epoxy resins

KEF037	Embedding mould Ø 25 mm, height 25 mm	1 piece
KEF029	Embedding mould Ø 30 mm, height 25 mm	1 piece
KEF024	Embedding mould Ø 40 mm, height 30 mm	1 piece
KEF038	Embedding mould Ø 50 mm, height 30 mm	1 piece
KEF039	Embedding mould Ø 60 mm, height 35 mm	1 piece
KEF040	Embedding mould □ 55 x 30 x 25 mm	1 piece
KEF041	Embedding mould □ 70 x 40 x 25 mm	1 piece
KEF042	Embedding mould □ 100 x 50 x 25 mm	1 piece



Silicone rubber – Embedding moulds with magnetic core for better fixation of magnetic materials!

KEF043	Embedding mould Ø 25 mm, height 25 mm	1 piece
KEF044	Embedding mould Ø 30 mm, height 25 mm	1 piece
KEF030	Embedding mould Ø 40 mm, height 30 mm	1 piece
KEF045	Embedding mould Ø 50 mm, height 30 mm	1 piece
KEF046	Embedding mould Ø 60 mm, height 35 mm	1 piece
KEF047	Embedding mould □ 55 x 30 x 25 mm	1 piece
KEF048	Embedding mould □ 70 x 40 x 25 mm	1 piece
KEF049	Embedding mould □ 100 x 50 x 25 mm	1 piece



KEF026	Embedding mould Ø 40 mm, height 30 mm	1 piece
"System Cover", with magnetic core (form consists of two parts)		

Embedding aids for warm and cold embedding

New version: simplified the application!

MonoClip006	MonoClip	Plastic	black	100 pieces
MonoClip007	MonoClip	Plastic	red	100 pieces
MonoClip008	MonoClip	Plastic	green	100 pieces
MonoClip009	MonoClip	Plastic	yellow	100 pieces
MonoClip010	MonoClip	Plastic	purple	100 pieces
MonoClip011	MonoClip	Plastic	mixed colors	100 pieces
MonoClip012	MonoClip	Plastic	transparent	100 pieces

New version: up to 6 samples can be embedded with one embedding aid!

SixClip001	SixClip	Plastic	purple	50 pieces
SixClip002	SixClip	Plastic	transparent	50 pieces

New version: fits into Ø 30 mm diameter embedding form!

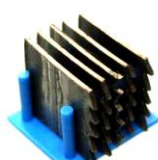
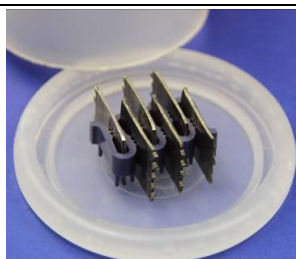
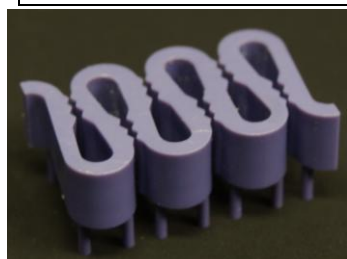
SampSix001	PolyClip	Plastic, purple	5 partitions, 1 mm distance	100 pieces
SampSix002	PolyClip	Plastic, grey	4 partitions, 2 mm distance	100 pieces
SampSix003	PolyClip	Plastic, white	3 partitions, 3 mm distance	100 pieces

New version, transparent: fits into Ø 30 mm diameter embedding form!

SampSix004	PolyClip	Plastic, transparent	5 partitions, 1 mm distance	100 pieces
SampSix005	PolyClip	Plastic, transparent	4 partitions, 2 mm distance	100 pieces
SampSix006	PolyClip	Plastic, transparent	3 partitions, 3 mm distance	100 pieces

ClipBox001	Range with all variations of embedding aids with practical transparent box Contains: 120 different embedding aids			
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Zub002	Mixing pot 0,2 l 10 pieces Mixing pot 0.2 l, thin-walled card, white, one-sided PE coated (inside), 10 pieces
Zub001	Mixing spatula, wood, 10 x 114 mm 50 pieces Mixing spatula, wood, 10 x 114 mm 50 pieces
TrenM001	TrenM 400 ml (silicone free!) Mould release agent for press- and embedding forms



Diamond plane- and fine grinding discs

DIPLAS Ni is a newly developed diamond plane grinding disc with diamonds bound in nickel.

DIPLAS Re is a newly developed diamond plane grinding disc with diamonds bound in resin.

Diplas Ni & Diplas Re replaces SiC – paper in many fields of plane and fine sanding.

Areas of application are: all **short span forming** materials, e.g. steel, cast alloys, ceramics, hard metals, glass and mineralogical materials.

During the grinding of austenitic steels, titanium alloys and Ni based alloys the wheel-wear can be higher.

The advantage as opposed to other plane grinding discs available on the market is that with **DIPLAS**

a 4-5 times higher surface removal rate can be achieved.

The disc also allows small test diameters as no great spaces exist on the disc.

DIPLAS achieves optimal edge sharpness in very short time.

No changing of sandpaper is necessary.

DIPLAS is characterized by a very high endurance opposite traditional plane grinding discs.

DIPLAS with optimal price/performance ratio

DIPLAS Ni gives it in the sizes \varnothing 200, 250 and 300 mm and in the grain sizes 120, 200, 400, 600 and 1000.

DIPLAS Re to grain size 3000 D1

DIPLAS was developed for the manual and automatic sample preparation.

DIPLAS is available with rear tie coat, so that it is usable with adapter discs on existing magnetic systems or on steel disc (see new order numbers)

DIPLAS001	DIPLAS Ni grain size 120	D126	\varnothing 200 mm
DIPLAS002	DIPLAS Ni grain size 200	D 76	\varnothing 200 mm
DIPLAS013	DIPLAS Ni grain size 400	D 40	\varnothing 200 mm
DIPLAS003	DIPLAS Ni grain size 600	D 25	\varnothing 200 mm
DIPLAS004	DIPLAS Ni grain size 1000	D 10	\varnothing 200 mm
DIPLAS005	DIPLAS Ni grain size 120	D126	\varnothing 250 mm
DIPLAS006	DIPLAS Ni grain size 200	D 76	\varnothing 250 mm
DIPLAS014	DIPLAS Ni grain size 400	D 40	\varnothing 250 mm
DIPLAS007	DIPLAS Ni grain size 600	D 25	\varnothing 250 mm
DIPLAS008	DIPLAS Ni grain size 1000	D 10	\varnothing 250 mm
DIPLAS009	DIPLAS Ni grain size 120	D126	\varnothing 300 mm
DIPLAS010	DIPLAS Ni grain size 200	D 76	\varnothing 300 mm
DIPLAS015	DIPLAS Ni grain size 400	D 40	\varnothing 300 mm
DIPLAS011	DIPLAS Ni grain size 600	D 25	\varnothing 300 mm
DIPLAS012	DIPLAS Ni grain size 1000	D 10	\varnothing 300 mm
DIPLAS016	DIPLAS Re grain size 60	D251	\varnothing 200 mm
DIPLAS017	DIPLAS Re grain size 120	D126	\varnothing 200 mm
DIPLAS018	DIPLAS Re grain size 200	D 76	\varnothing 200 mm
DIPLAS019	DIPLAS Re grain size 400	D 40	\varnothing 200 mm
DIPLAS020	DIPLAS Re grain size 600	D 25	\varnothing 200 mm
DIPLAS021	DIPLAS Re grain size 1000	D 10	\varnothing 200 mm
DIPLAS022	DIPLAS Re grain size 3000	D 1	\varnothing 200 mm
DIPLAS023	DIPLAS Re grain size 60	D251	\varnothing 250 mm
DIPLAS024	DIPLAS Re grain size 120	D126	\varnothing 250 mm
DIPLAS025	DIPLAS Re grain size 200	D 76	\varnothing 250 mm
DIPLAS026	DIPLAS Re grain size 400	D 40	\varnothing 250 mm
DIPLAS027	DIPLAS Re grain size 600	D 25	\varnothing 250 mm
DIPLAS028	DIPLAS Re grain size 1000	D 10	\varnothing 250 mm
DIPLAS029	DIPLAS Re grain size 3000	D 1	\varnothing 250 mm
DIPLAS030	DIPLAS Re grain size 60	D251	\varnothing 300 mm
DIPLAS031	DIPLAS Re grain size 120	D126	\varnothing 300 mm
DIPLAS032	DIPLAS Re grain size 200	D 76	\varnothing 300 mm
DIPLAS033	DIPLAS Re grain size 400	D 40	\varnothing 300 mm
DIPLAS034	DIPLAS Re grain size 600	D 25	\varnothing 300 mm
DIPLAS035	DIPLAS Re grain size 1000	D 10	\varnothing 300 mm
DIPLAS036	DIPLAS Re grain size 3000	D 1	\varnothing 300 mm

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Other diameters and grain sizes on request!

DIPLAS on steel disc for all magnetic holding systems!

DIPLAS040	DIPLAS Ni S	grain size 120	D126	ø 200 mm
DIPLAS041	DIPLAS Ni S	grain size 200	D 76	ø 200 mm
DIPLAS042	DIPLAS Ni S	grain size 400	D 40	ø 200 mm
DIPLAS043	DIPLAS Ni S	grain size 600	D 25	ø 200 mm
DIPLAS044	DIPLAS Ni S	grain size 1000	D 10	ø 200 mm
DIPLAS045	DIPLAS Ni S	grain size 120	D126	ø 250 mm
DIPLAS046	DIPLAS Ni S	grain size 200	D 76	ø 250 mm
DIPLAS047	DIPLAS Ni S	grain size 400	D 40	ø 250 mm
DIPLAS048	DIPLAS Ni S	grain size 600	D 25	ø 250 mm
DIPLAS049	DIPLAS Ni S	grain size 1000	D 10	ø 250 mm
DIPLAS050	DIPLAS Ni S	grain size 120	D126	ø 300 mm
DIPLAS051	DIPLAS Ni S	grain size 200	D 76	ø 300 mm
DIPLAS052	DIPLAS Ni S	grain size 400	D 40	ø 300 mm
DIPLAS053	DIPLAS Ni S	grain size 600	D 25	ø 300 mm
DIPLAS054	DIPLAS Ni S	grain size 1000	D 10	ø 300 mm
DIPLAS055	DIPLAS Re S	grain size 60	D251	ø 200 mm
DIPLAS056	DIPLAS Re S	grain size 120	D126	ø 200 mm
DIPLAS057	DIPLAS Re S	grain size 200	D 76	ø 200 mm
DIPLAS058	DIPLAS Re S	grain size 400	D 40	ø 200 mm
DIPLAS059	DIPLAS Re S	grain size 600	D 25	ø 200 mm
DIPLAS060	DIPLAS Re S	grain size 1000	D 10	ø 200 mm
DIPLAS061	DIPLAS Re S	grain size 3000	D 1	ø 200 mm
DIPLAS062	DIPLAS Re S	grain size 60	D251	ø 250 mm
DIPLAS063	DIPLAS Re S	grain size 120	D126	ø 250 mm
DIPLAS064	DIPLAS Re S	grain size 200	D 76	ø 250 mm
DIPLAS065	DIPLAS Re S	grain size 400	D 40	ø 250 mm
DIPLAS066	DIPLAS Re S	grain size 600	D 25	ø 250 mm
DIPLAS067	DIPLAS Re S	grain size 1000	D 10	ø 250 mm
DIPLAS068	DIPLAS Re S	grain size 3000	D 1	ø 250 mm
DIPLAS069	DIPLAS Re S	grain size 60	D251	ø 300 mm
DIPLAS070	DIPLAS Re S	grain size 120	D126	ø 300 mm
DIPLAS071	DIPLAS Re S	grain size 200	D 76	ø 300 mm
DIPLAS072	DIPLAS Re S	grain size 400	D 40	ø 300 mm
DIPLAS073	DIPLAS Re S	grain size 600	D 25	ø 300 mm
DIPLAS074	DIPLAS Re S	grain size 1000	D 10	ø 300 mm
DIPLAS075	DIPLAS Re S	grain size 3000	D 1	ø 300 mm

Other diameters and grain sizes on request!

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Aka-PIATTO – Diamond plane- and fine grinding discs

Aka-PIATTO is a diamond plane- and fine grinding disc with a very good stock removal, rate and achieves excellent edge sharpness and high durability.

Aka-PIATTO replaces in many preparations, the rough- and fine grinding with SiC paper.

They are available in grain sizes 80, 120, 220, 600 and 1200. It is very easy to see which PIATTO-disc is being used by the brilliant colour-coding.

All **Aka-PIATTOs** are corrosion resistant and adaptable to an MD-disc.

Aka-PIATTOs are suitable for materials with hardness from 150 to 2000 HV.

Aka-Piatto Plus - Diamond plane- and fine grinding disc with twice as high diamond concentration! As a result, the lifetime increases significantly (approx. by 80%)!

PIATTO001 PIATTO grain size 80	colour red	PIATTO Ø 200 mm
PIATTO002 PIATTO grain size 120	colour gold	
PIATTO003 PIATTO grain size 220	colour green	
PIATTO004 PIATTO grain size 600	colour blue	
PIATTO005 PIATTO grain size 1200	colour black	
PIATTO006 PIATTO grain size 80	colour red	PIATTO Ø 250 mm
PIATTO007 PIATTO grain size 120	colour gold	
PIATTO008 PIATTO grain size 220	colour green	
PIATTO009 PIATTO grain size 600	colour blue	
PIATTO010 PIATTO grain size 1200	colour black	
PIATTO011 PIATTO grain size 80	colour red	PIATTO Ø 300 mm
PIATTO012 PIATTO grain size 120	colour gold	
PIATTO013 PIATTO grain size 220	colour green	
PIATTO014 PIATTO grain size 600	colour blue	
PIATTO015 PIATTO grain size 1200	colour black	
PIATTO016 PIATTO+ grain size 80	colour red	PIATTO Plus Ø 200 mm
PIATTO017 PIATTO+ grain size 120	colour gold	
PIATTO018 PIATTO+ grain size 220	colour green	
PIATTO019 PIATTO+ grain size 600	colour blue	
PIATTO020 PIATTO+ grain size 1200	colour black	
PIATTO021 PIATTO+ grain size 80	colour red	PIATTO Plus Ø 250 mm
PIATTO022 PIATTO+ grain size 120	colour gold	
PIATTO023 PIATTO+ grain size 220	colour green	
PIATTO024 PIATTO+ grain size 600	colour blue	
PIATTO025 PIATTO+ grain size 1200	colour black	
PIATTO026 PIATTO+ grain size 80	colour red	PIATTO Plus Ø 300 mm
PIATTO027 PIATTO+ grain size 120	colour gold	
PIATTO028 PIATTO+ grain size 220	colour green	
PIATTO029 PIATTO+ grain size 600	colour blue	
PIATTO030 PIATTO+ grain size 1200	colour black	

Corundum sharpening stone

AZS001 **sharpening stone** for free-cutting of diamond grinding discs (DIPLAS, PIATTO, or other) and diamond cutting discs

Wet grinding paper

SiC - Wet grinding paper not self-adhesive

NSP105	grain sizes	60, 240 µm	
NSP001	grain sizes	80, 196 µm	
NSP002	grain sizes	120, 120 µm	
NSP003	grain sizes	180, 75 µm	
NSP004	grain sizes	220, 65 µm	
NSP005	grain sizes	320, 46 µm	
NSP006	grain sizes	400, 35 µm	Ø 200 mm, not self-adhesive, VE 100 sheet
NSP007	grain sizes	500, 30 µm	
NSP008	grain sizes	600, 25 µm	
NSP009	grain sizes	800, 22 µm	
NSP010	grain sizes	1000, 18 µm	
NSP011	grain sizes	1200, 15 µm	
NSP013	grain sizes	2500, 10 µm	
NSP109	grain sizes	4000, 5 µm	

NSP106	grain sizes	60, 240 µm	
NSP014	grain sizes	80, 196 µm	
NSP015	grain sizes	120, 120 µm	
NSP016	grain sizes	180, 75 µm	
NSP017	grain sizes	220, 65 µm	
NSP018	grain sizes	320, 46 µm	
NSP019	grain sizes	400, 35 µm	Ø 230 mm, not self-adhesive, VE 100 sheet
NSP020	grain sizes	500, 30 µm	
NSP021	grain sizes	600, 25 µm	
NSP022	grain sizes	800, 22 µm	
NSP023	grain sizes	1000, 18 µm	
NSP024	grain sizes	1200, 15 µm	
NSP026	grain sizes	2500, 10 µm	
NSP110	grain sizes	4000, 5 µm	

NSP107	grain sizes	60, 240 µm	
NSP027	grain sizes	80, 196 µm	
NSP028	grain sizes	120, 120 µm	
NSP029	grain sizes	180, 75 µm	
NSP030	grain sizes	220, 65 µm	
NSP031	grain sizes	320, 46 µm	
NSP032	grain sizes	400, 35 µm	Ø 250 mm, not self-adhesive, VE 100 sheet
NSP033	grain sizes	500, 30 µm	
NSP034	grain sizes	600, 25 µm	
NSP035	grain sizes	800, 22 µm	
NSP036	grain sizes	1000, 18 µm	
NSP037	grain sizes	1200, 15 µm	
NSP039	grain sizes	2500, 10 µm	
NSP111	grain sizes	4000, 5 µm	

NSP108	grain sizes	60, 240 µm	
NSP040	grain sizes	80, 196 µm	
NSP041	grain sizes	120, 120 µm	
NSP042	grain sizes	180, 75 µm	
NSP043	grain sizes	220, 65 µm	
NSP044	grain sizes	320, 46 µm	
NSP045	grain sizes	400, 35 µm	Ø 300 mm, not self-adhesive, VE 100 sheet
NSP046	grain sizes	500, 30 µm	
NSP047	grain sizes	600, 25 µm	
NSP048	grain sizes	800, 22 µm	
NSP049	grain sizes	1000, 18 µm	
NSP050	grain sizes	1200, 15 µm	
NSP052	grain sizes	2500, 10 µm	
NSP112	grain sizes	4000, 5 µm	

SiC - Wet grinding paper self-adhesive

NSP054 grain size 120, 120 µm
 NSP055 grain size 180, 75 µm
 NSP058 grain size 400, 35 µm
 NSP060 grain size 600, 25 µm
 NSP062 grain size 1000, 18 µm
 NSP063 grain size 1200, 15 µm

Ø 200 mm, self-adhesive, VE 100 sheet

NSP066 grain size 80, 196 µm
 NSP067 grain size 120, 120 µm
 NSP068 grain size 180, 75 µm
 NSP069 grain size 240, 65 µm
 NSP070 grain size 320, 46 µm
 NSP071 grain size 400, 35 µm
 NSP072 grain size 500, 30 µm
 NSP073 grain size 600, 25 µm
 NSP074 grain size 800, 22 µm
 NSP075 grain size 1000, 18 µm
 NSP076 grain size 1200, 15 µm

Ø 230 mm, self-adhesive, VE 100 sheet
Minimum order quantity: 5 VE per grain size

NSP079 grain size 80, 196 µm
 NSP080 grain size 120, 120 µm
 NSP081 grain size 180, 75 µm
 NSP082 grain size 240, 65 µm
 NSP083 grain size 320, 46 µm
 NSP084 grain size 400, 35 µm
 NSP085 grain size 500, 30 µm
 NSP086 grain size 600, 25 µm
 NSP087 grain size 800, 22 µm
 NSP088 grain size 1000, 18 µm
 NSP089 grain size 1200, 15 µm

Ø 250 mm, self-adhesive, VE 100 sheet

NSP092 grain size 80, 196 µm
 NSP093 grain size 120, 120 µm
 NSP094 grain size 180, 75 µm
 NSP095 grain size 240, 65 µm
 NSP096 grain size 320, 46 µm
 NSP097 grain size 400, 35 µm
 NSP098 grain size 500, 30 µm
 NSP099 grain size 600, 25 µm
 NSP100 grain size 800, 22 µm
 NSP101 grain size 1000, 18 µm
 NSP102 grain size 1200, 15 µm

Ø 300 mm, self-adhesive, VE 100 sheet

Delivery time: approx. 3 - 4 days

Minimum order quantity: 1 VE (except Ø 230 mm self-adhesive)

SiC-Wet grinding paper Ø 305 mm not self-adhesive on request
(Delivery time approx. 3 weeks)

Not self-adhesive: grain size 60 in Ø 200 mm und Ø 250 mm, grain size 220 in Ø 200 mm, grain size 2500 in Ø 200 mm (mostly in stock),

Grain size 4000 in all diameters

Self-adhesive: all grain sizes in Ø 230 mm, grain size 80, 500, 800 in Ø 250 mm and grain size 80, 500 in Ø 300 mm

Other measurements and grain sizes on request!

Endless fabric abrasive belts for belt grinders available on request

Abrasive material: Corundum or silicon carbide

Zircon corundum - Wet grinding paper

Zirko001	grain size 80	Ø 200 mm	not self-adhesive, VE 25 sheet
Zirko002	grain size 80	Ø 250 mm	
Zirko003	grain size 80	Ø 300 mm	
Zirko004	grain size 120	Ø 200 mm	
Zirko005	grain size 120	Ø 250 mm	
Zirko006	grain size 120	Ø 300 mm	

Aluminum oxide (corundum) – Wet grinding paper on request!

GripFix

The adapter disc for the fixing of non self-adhesive wet grinding papers that keeps what it promises!

We guarantee the changing of at least 80 wet grinding paper sheets when used correctly.

GripFix can be used without problems on all magnetic carrier discs as it is applied on a ferrous foil. After the stripping off the protective film (do not discard) wet the surface with water, reducing the sticking strength a little, whilst remaining more than sufficient for the fixing of wet grinding paper. After use the grinding paper should be removed and if **GripFix** is no longer required, the drying-out of adhesive surface can be reduced by attaching the protective foil, so you have a durable **GripFix** - adapter disc.

GF001	GripFix Ø 200 mm
GF002	GripFix Ø 250 mm
GF003	GripFix Ø 300 mm

Ø 350 on request!

New!

Adapter disc Aka-Rhaco

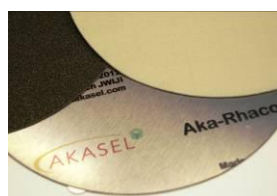
New!

The adapter disc Aka-Rhaco can be used with rear-coated and self-adhesive polishing cloths as well as with coated SiC paper. It works well with our non-adhesive SiC paper!

Good adhesion, the supplies are easy to apply and remove.

Magnetically-adhesive onto all magnet carrier discs.

Gek001	Aka- Rhaco Ø 200 mm	1 piece
Gek004	Aka- Rhaco Ø 200 mm	2 pieces
Gek002	Aka- Rhaco Ø 250 mm	1 piece
Gek005	Aka- Rhaco Ø 250 mm	2 pieces
Gek003	Aka- Rhaco Ø 300 mm	1 piece
Gek006	Aka- Rhaco Ø 300 mm	2 pieces



Ø 350 mm on request!

New!

Adapterdisc Aka-Rhaco flex

New!

The adapter disc Aka-Rhaco-flex applies the same features as the Aka-Rhaco, but is attached on ferro-foil

On Ferro-foil:

Gek007	Aka- Rhaco flex Ø 200 mm	1 piece
Gek010	Aka- Rhaco flex Ø 200 mm	2 pieces
Gek013	Aka- Rhaco flex Ø 230 mm	1 piece
Gek014	Aka- Rhaco flex Ø 230 mm	2 pieces
Gek008	Aka- Rhaco flex Ø 250 mm	1 piece
Gek011	Aka- Rhaco flex Ø 250 mm	2 pieces
Gek009	Aka- Rhaco flex Ø 300 mm	1 piece
Gek012	Aka- Rhaco flex Ø 300 mm	2 pieces



Ø 350 mm on request!

Klebfix - Adhesive foil for non self-adhesive SiC-Paper

KF001	Klebfix Ø 203 mm	VE 10 pieces
KF002	Klebfix Ø 230 mm	VE 10 pieces
KF003	Klebfix Ø 254 mm	VE 10 pieces
KF004	Klebfix Ø 305 mm	VE 10 pieces

Adhesive spray - removable

Adhesive spray for attaching non self-adhesive SiC-Paper onto adapter discs
Very easy to use and disposal of adhesive residues without solvent possible

HSK001 **Adhesive spray can** 400 ml

Grindstones ALPLAS

Grindstones for the surface grinding of test fasteners on the AbraPlan or MAPS made by the company Struers.
Grindstones for other device types are available on request.

ALPLAS is an Al_2O_3 - grindstone for normal applications for example steel, hardened steel, aluminium alloys, pottery, composites and other.

ALPLAS001	grindstone Al_2O_3 grain size A 36
ALPLAS002	grindstone Al_2O_3 grain size A 60
ALPLAS003	grindstone Al_2O_3 grain size A 80
ALPLAS004	grindstone Al_2O_3 grain size A 120
ALPLAS005	grindstone Al_2O_3 grain size A 150

SiC – grindstones, Pot grinding discs and diamond- and aluminum oxide foils available on request!

New!**Aka-Largan 9****New!****The fine grinding disc for optimum flatness!**

Largan 9 is a composite disc for single stage fine grinding of materials which exhibits a hardness of under 150 HV.

In the process a diamond suspension (or diamond spray) and a lubricant are added.

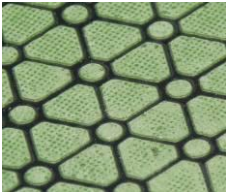
Largan 9 replaces the further grinding with SiC-paper (2-4 grinding steps).

Largan 9 achieves a high material removal and perfect flatness over complete sample cross-section.

After a preparation step with **Largan 9**, the sample is prepared already optimally for polishing.

Largan 9 works most efficient with 9 µm diamond products. It can be used either a diamond suspension or diamond spray with lubricant. You can use green or yellow, or most simply a two-in-One suspension, such as suspension DiaDoublo 9 µm.

- High material removal with low distortion-depth
- High flatness and perfect edge sharpness
- Savings of 2-4 grinding steps on SiC-paper
- For materials with a hardness of under 150 HV
- Corrosion resistant

Lar001	Largan 9	ø 200 mm		1 piece
Lar007	Largan 9	ø 200 mm		2 pieces
Lar002	Largan 9	ø 200 mm		5 pieces
Lar003	Largan 9	ø 250 mm		1 piece
Lar008	Largan 9	ø 250 mm		2 pieces
Lar004	Largan 9	ø 250 mm		5 pieces
Lar005	Largan 9	ø 300 mm		1 piece
Lar009	Largan 9	ø 300 mm		2 pieces
Lar006	Largan 9	ø 300 mm		5 pieces

Aka-Allegran 9**The fine grinding disc for optimum flatness!**

Allegran 9 is a composite disc for single stage fine grinding of materials which exhibits a hardness of over 150 HV.

In the process a diamond suspension (or diamond spray) and a lubricant are added.


Allegran 9 replaces the further grinding with SiC-paper (2-4 grinding steps).

Allegran 9 achieves a high material removal and perfect flatness over complete sample cross-section.

After a preparation step with **Allegran 9**, the sample is prepared already optimally for polishing.

Allegran 9 works most efficient with 9 µm diamond products. It can be used either a diamond suspension or diamond spray with lubricant. You can use green or yellow, or most simply a two-in-One suspension, such as suspension DiaDoublo 9 µm.

- High material removal with low distortion-depth
- High flatness and perfect edge sharpness
- Savings of 2-4 grinding steps on SiC-paper
- For materials with a hardness of over 150 HV
- Corrosion resistant

FEGAS001	Allegran 9	ø 200 mm		1 piece
FEGAS007	Allegran 9	ø 200 mm		2 pieces
FEGAS002	Allegran 9	ø 200 mm		5 pieces
FEGAS003	Allegran 9	ø 250 mm		1 piece
FEGAS008	Allegran 9	ø 250 mm		2 pieces
FEGAS004	Allegran 9	ø 250 mm		5 pieces
FEGAS005	Allegran 9	ø 300 mm		1 piece
FEGAS009	Allegran 9	ø 300 mm		2 pieces
FEGAS006	Allegran 9	ø 300 mm		5 pieces

Aka-Allegran 3 and Aka-Allegran 1

The polishing discs for optimum flatness!

Allegran 3 and Allegran 1 are composite discs for one-step polishing of materials, which have a hardness of over 150 HV.

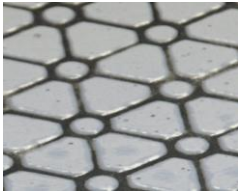
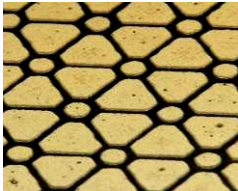
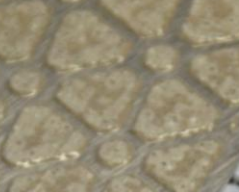
Allegran 3 and Allegran 1 replace the polishing with polishing cloths of ceramics, hard metals and other materials.

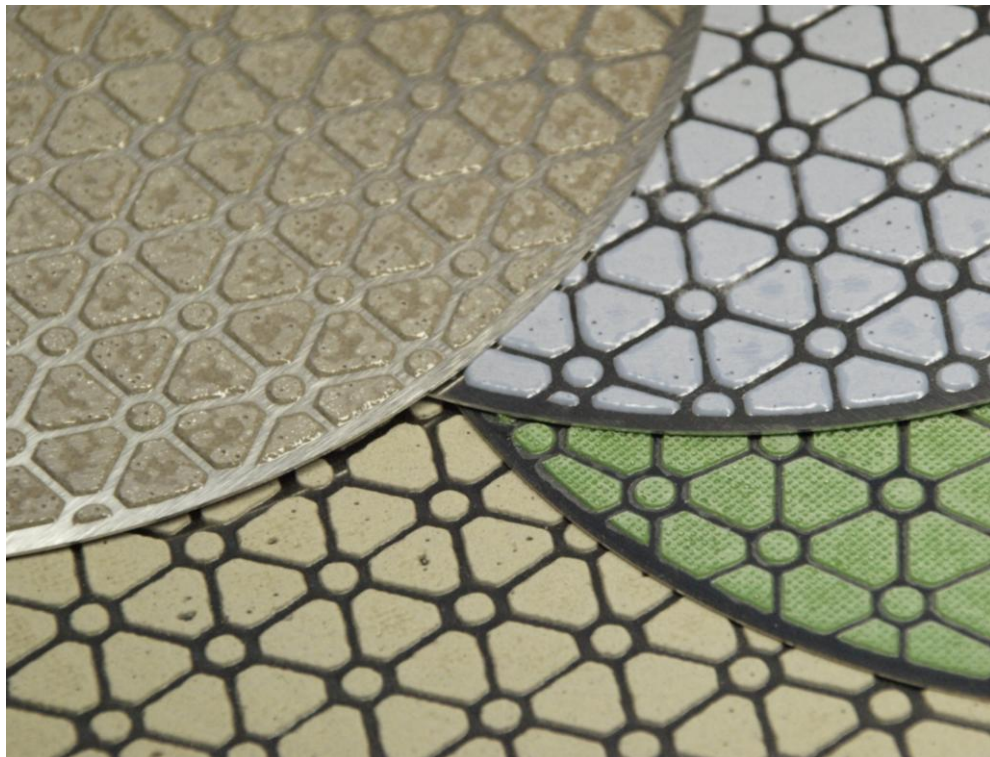
Allegran 3 and Allegran 1 achieve a high material removal and perfect flatness over complete sample cross-section.

After this polishing step with *Allegran 3 or Allegran 1*, the sample is prepared already optimally for microscopic examination.

Allegran 3 and Allegran 1 work best with a 3 µm respectively 1 µm diamond suspension without lubricant.

- High material removal with low distortion-depth
- High flatness and perfect edge sharpness
- For materials with a hardness of over 150 HV
- Corrosion resistant

ALGN001	Allegran 3	ø 200 mm		1 piece
ALGN013	Allegran 3	ø 200 mm		2 pieces
ALGN002	Allegran 3	ø 200 mm		5 pieces
ALGN003	Allegran 3	ø 250 mm		1 piece
ALGN014	Allegran 3	ø 250 mm		2 pieces
ALGN004	Allegran 3	ø 250 mm		5 pieces
ALGN005	Allegran 3	ø 300 mm		1 piece
ALGN015	Allegran 3	ø 300 mm		2 pieces
ALGN006	Allegran 3	ø 300 mm		5 pieces
ALGN007	Allegran 1	ø 200 mm		1 piece
ALGN016	Allegran 1	ø 200 mm		2 pieces
ALGN008	Allegran 1	ø 200 mm		5 pieces
ALGN009	Allegran 1	ø 250 mm		1 piece
ALGN017	Allegran 1	ø 250 mm		2 pieces
ALGN010	Allegran 1	ø 250 mm		5 pieces
ALGN011	Allegran 1	ø 300 mm		1 piece
ALGN018	Allegran 1	ø 300 mm		2 pieces
ALGN012	Allegran 1	ø 300 mm		5 pieces



Poliertücher

PT Plan / Aka-Plaran

A very hard and extremely flat polishing cloth. It is very suitable for fine grinding with 15 and 9 µm diamond products and for polishing with 3 and 6 µm. Suitable for manual and automatic preparation. High material removal rate - very excellent edge sharpness!

PT Super Plan

A very hard layered chemical fibre cloth with a very plan surface. For fine grinding, pre- and final polishing with diamond polishing materials from 45 to 1 µm. Very long lifetime and good flatness because of low impact resilience!

PT Super Plan Perforated

Perforated, very tough layered chemical fibre cloth with a very flat surface. For fine grinding, pre- and final polishing with diamond polishing materials 45 - 1 µm. Very long lifetime and good flatness because of low impact resilience!

PT Pan / Aka-Paran

A firm, hard and dense synthetic fibre cloth with very low impact resilience. Suitable for pre-, intermediate- and final polishing with diamond polishing materials 25 - 1 µm. High level of flatness and good edge sharpness!

PT Silk

Medium hard synthetic silk cloth for polishing with diamond polishing materials from 15 to 3 µm. Perfect flatness, high durability and very excellent polishing results!

PT Seda / Aka-Daran

Medium hard synthetic silk cloth for polishing with diamond polishing materials from 6 to 0,25 µm. Perfect flatness, very excellent polishing results!

Aka-Ramda

Medium hard synthetic silk cloth for polishing with diamond polishing materials from 6 to 3 µm.

PT Mol / Aka-Moran

Woven Polishing cloth from 100% new wool for intermediate- and final polishing with diamond polishing materials 9 -3 µm. Newly developed high quality! Very good polishing performance, perfect flatness, long life time!

PT Flock

Soft, flocked polishing cloth with absorbent viscose fibres. Suitable for pre- and final polishing with diamond polishing materials, 3 µm or thinner. Very good flatness and polished surface!

Aka-Plural

Robust synthetic fiber cloth. Suitable for pre-and final polishing with diamond polishing materials, 3 µm or finer.

PT Nap

Short pile velvet cloth for final polishing with diamond products < 3 µm and for oxide polish suitable. Excellent flatness and long life time!

Aka-Napal

Soft synthetic fiber cloth for final polishing with diamond products <3 µm and for oxide polish suitable.

PT Skin

Dense, non-woven polishing cloth made of 100% polyester fibres, Suitable for pre-and final polishing with diamond- or oxide polishing materials.
Excellent flatness!

PT Chem / Aka-Chemal

Chemical-resistant, porous, soft synthetic cloth. For final polishing (also chemical-mechanical) with oxide polishing materials suitable.
Excellent flatness.

PT Chem Perforated

Perforated, chemical-resistant, soft synthetic cloth. For final polishing (also chemical-mechanical) with oxide polishing materials suitable. Extensive samples can be edited very well, because they are not "sucked" by the specific surface. Short polishing times and good flatness. Less consumption of final polishing suspension!

Polishing cloths, self-adhesive

Diamond polishing cloths, Ø 200 mm, self-adhesive, VE of 5 pieces

PT001	PT Plan	hard synthetic fibre cloth
PT022	PT Super Plan	very hard chemistry fibre cloth
PT025	PT Super Plan Perforated	very hard chemistry fibre cloth, perforated
PT004	PT Pan	hard synthetic fibre cloth
PT007	PT Silk	medium-hard synthetic silk cloth
PT067	PT Seda	medium-hard synthetic silk cloth
PT040	PT Mol	woven polishing cloth from 100 % new wool
PT010	PT Flock	soft, flocked polishing cloth
PT031	PT Nap	short pile velvet cloth, black
PT089	PT Skin	soft polyester cloth
PT016	PT Chem	soft synthetic cloth, chemically resistant
PT028	PT Chem Perforated	soft synthetic cloth, chemically resistant

Diamond polishing cloths, Ø 250 mm, self-adhesive, VE of 5 pieces

PT002	PT Plan	hard synthetic fibre cloth
PT023	PT Super Plan	very hard chemistry fibre cloth
PT026	PT Super Plan Perforated	very hard chemistry fibre cloth, perforated
PT005	PT Pan	hard synthetic fibre cloth
PT008	PT Silk	medium-hard synthetic silk cloth
PT068	PT Seda	medium-hard synthetic silk cloth
PT041	PT Mol	woven polishing cloth from 100 % new wool
PT011	PT Flock	soft, flocked polishing cloth
PT032	PT Nap	short pile velvet cloth, black
PT090	PT Skin	soft polyester cloth
PT017	PT Chem	soft synthetic cloth, chemically resistant
PT029	PT Chem Perforated	soft synthetic cloth, chemically resistant

Diamond polishing cloths, Ø 300 mm, self-adhesive, VE of 5 pieces

PT003	PT Plan	hard synthetic fibre cloth
PT024	PT Super Plan	very hard chemistry fibre cloth
PT027	PT Super Plan Perforated	very hard chemistry fibre cloth, perforated
PT006	PT Pan	hard synthetic fibre cloth
PT009	PT Silk	medium-hard synthetic silk cloth
PT069	PT Seda	medium-hard synthetic silk cloth
PT042	PT Mol	woven polishing cloth from 100 % new wool
PT012	PT Flock	soft, flocked polishing cloth
PT033	PT Nap	short pile velvet cloth, black
PT091	PT Skin	soft polyester cloth
PT018	PT Chem	soft synthetic cloth, chemically resistant
PT030	PT Chem Perforated	soft synthetic cloth, chemically resistant

MAGPOL S – magnetic polishing cloths on steel disc

Diamond polishing cloths, Ø 200 mm, on steel disc, VE of 5 pieces

SPT001	PT Plan S	hard synthetic fibre cloth
SPT022	PT Super Plan S	very hard chemistry fibre cloth
SPT025	PT Super Plan Perforated S	very hard chemistry fibre cloth, perforated
SPT004	PT Pan S	hard synthetic fibre cloth
SPT007	PT Silk S	medium-hard synthetic silk cloth
SPT067	PT Seda S	medium-hard synthetic silk cloth
SPT040	PT Mol S	woven polishing cloth from 100 % new wool
SPT010	PT Flock S	soft, flocked polishing cloth
SPT031	PT Nap S	short pile velvet cloth, black
SPT089	PT Skin S	soft polyester cloth
SPT016	PT Chem S	soft synthetic cloth, chemically resistant
SPT028	PT Chem Perforated S	soft synthetic cloth, chemically resistant

Diamond polishing cloths, Ø 250 mm, on steel disc, VE of 5 pieces

SPT002	PT Plan S	hard synthetic fibre cloth
SPT023	PT Super Plan S	very hard chemistry fibre cloth
SPT026	PT Super Plan Perforated S	very hard chemistry fibre cloth, perforated
SPT005	PT Pan S	hard synthetic fibre cloth
SPT008	PT Silk S	medium-hard synthetic silk cloth
SPT068	PT Seda S	medium-hard synthetic silk cloth
SPT041	PT Mol S	woven polishing cloth from 100 % new wool
SPT011	PT Flock S	soft, flocked polishing cloth
SPT032	PT Nap S	short pile velvet cloth, black
SPT090	PT Skin S	soft polyester cloth
SPT017	PT Chem S	soft synthetic cloth, chemically resistant
SPT029	PT Chem Perforated S	soft synthetic cloth, chemically resistant

Diamond polishing cloths, Ø 300 mm, on steel disc, VE of 5 pieces

SPT003	PT Plan S	hard synthetic fibre cloth
SPT024	PT Super Plan S	very hard chemistry fibre cloth
SPT027	PT Super Plan Perforated S	very hard chemistry fibre cloth, perforated
SPT006	PT Pan S	hard synthetic fibre cloth
SPT009	PT Silk S	medium-hard synthetic silk cloth
SPT069	PT Seda S	medium-hard synthetic silk cloth
SPT042	PT Mol S	woven polishing cloth from 100 % new wool
SPT012	PT Flock S	soft, flocked polishing cloth
SPT033	PT Nap S	short pile velvet cloth, black
SPT091	PT Skin S	soft polyester cloth
SPT018	PT Chem S	soft synthetic cloth, chemically resistant
SPT030	PT Chem Perforated S	soft synthetic cloth, chemically resistant

MAGPOL FF – magnetic polishing cloths on Ferro-foil

MAGPOL is a new generation of magnetic polishing cloths. They can be used on all MD-discs from all manufactures. You simply put their MAGPOL FF on a MD-disc and you can start to polish immediately. The advantage of MAGPOL is that you don't have to dispose any valuable raw material (steel) and you are no longer exposed to risk of injury. The polishing results and durability are excellent with MAGPOL FF.

Diamond polishing cloths, Ø 200 mm, on Ferro-foil, VE of 5 pieces

MPT001	PT Plan M	hard synthetic fibre cloth
MPT022	PT Super Plan M	very hard chemistry fibre cloth
MPT025	PT Super Plan Perforated M	very hard chemistry fibre cloth, perforated
MPT004	PT Pan M	hard synthetic fibre cloth
MPT007	PT Silk M	medium-hard synthetic silk cloth
MPT067	PT Seda M	medium-hard synthetic silk cloth
MPT040	PT Mol M	woven polishing cloth from 100 % new wool
MPT010	PT Flock M	soft, flocked polishing cloth
MPT031	PT Nap M	short pile velvet cloth, black
MPT089	PT Skin M	soft polyester cloth

Diamond polishing cloths, Ø 250 mm, on Ferro-foil, VE of 5 pieces

MPT002	PT Plan M	hard synthetic fibre cloth
MPT023	PT Super Plan M	very hard chemistry fibre cloth
MPT026	PT Super Plan Perforated M	very hard chemistry fibre cloth, perforated
MPT005	PT Pan M	hard synthetic fibre cloth
MPT008	PT Silk M	medium-hard synthetic silk cloth
MPT068	PT Seda M	medium-hard synthetic silk cloth
MPT041	PT Mol M	woven polishing cloth from 100 % new wool
MPT011	PT Flock M	soft, flocked polishing cloth
MPT032	PT Nap M	short pile velvet cloth, black
MPT090	PT Skin M	soft polyester cloth

Diamond polishing cloths, Ø 300 mm, on Ferro-foil, VE of 5 pieces

MPT003	PT Plan M	hard synthetic fibre cloth
MPT024	PT Super Plan M	very hard chemistry fibre cloth
MPT027	PT Super Plan Perforated M	very hard chemistry fibre cloth, perforated
MPT006	PT Pan M	hard synthetic fibre cloth
MPT009	PT Silk M	medium-hard synthetic silk cloth
MPT069	PT Seda M	medium-hard synthetic silk cloth
MPT042	PT Mol M	woven polishing cloth from 100 % new wool
MPT012	PT Flock M	soft, flocked polishing cloth
MPT033	PT Nap M	short pile velvet cloth, black
MPT091	PT Skin M	soft polyester cloth



New! Exclusive-Polishing cloths of Akasel New!

The polishing cloths are self-adhesive and contain a thin polymer barrier. The lubricant and abrasive adhere to the surface of the polishing cloth. A newly developed adhesive and a special foil that can be used with the new adapter disc Aka-Rhaco, ensures easy application and removal of the cloth.

Furthermore, there is a mounting link at the polishing cloths, so that the pulling of the foil and the removal of the polishing cloth is simplified by the adapter disc.

Diamond polishing cloths, Ø 200 mm, self-adhesive with foil, VE of 5 pieces

PT086	Aka-Plaran	hard synthetic fibre cloth
PT098	Aka-Paran	hard synthetic fibre cloth
PT074	Aka-Plural	robust synthetic fibre cloth
PT077	Aka-Daran	medium-hard synthetic silk cloth
PT095	Aka-Ramda	medium-hard synthetic silk cloth
PT080	Aka-Moran	woven polishing cloth from 100 % new wool
PT083	Aka-Napal	soft synthetic fibre cloth
PT092	Aka-Chemal	soft synthetic fibre cloth, chemically resistant

PT087	Aka-Plaran	hard synthetic fibre cloth
PT099	Aka-Paran	hard synthetic fibre cloth
PT075	Aka-Plural	robust synthetic fibre cloth
PT078	Aka-Daran	medium-hard synthetic silk cloth
PT096	Aka-Ramda	medium-hard synthetic silk cloth
PT081	Aka-Moran	woven polishing cloth from 100 % new wool
PT084	Aka-Napal	soft synthetic fibre cloth
PT093	Aka-Chemal	soft synthetic fibre cloth, chemically resistant

PT088	Aka-Plaran	hard synthetic fibre cloth
PT100	Aka-Paran	hard synthetic fibre cloth
PT076	Aka-Plural	robust synthetic fibre cloth
PT079	Aka-Daran	medium-hard synthetic silk cloth
PT097	Aka-Ramda	medium-hard synthetic silk cloth
PT082	Aka-Moran	woven polishing cloth from 100 % new wool
PT085	Aka-Napal	soft synthetic fibre cloth
PT094	Aka-Chemal	soft synthetic fibre cloth, chemically resistant

New! Magnetic polishing cloths of Akasel

Diamond polishing cloths, Ø 200 mm, on steel disc, VE of 5 pieces

SPT086	Mag-Plaran	hard synthetic fibre cloth
SPT098	Mag-Paran	hard synthetic fibre cloth
SPT074	Mag-Plural	robust synthetic fibre cloth
SPT077	Mag-Daran	medium-hard synthetic silk cloth
SPT095	Mag-Ramda	medium-hard synthetic silk cloth
SPT080	Mag-Moran	woven polishing cloth from 100 % new wool
SPT083	Mag-Napal	soft synthetic fibre cloth
SPT092	Mag-Chemal	soft synthetic fibre cloth, chemically resistant

Diamond polishing cloths, Ø 250 mm, on steel disc, VE of 5 pieces

SPT087	Mag-Plaran	hard synthetic fibre cloth
SPT099	Mag-Paran	hard synthetic fibre cloth
SPT075	Mag-Plural	robust synthetic fibre cloth
SPT078	Mag-Daran	medium-hard synthetic silk cloth
SPT096	Mag-Ramda	medium-hard synthetic silk cloth
SPT081	Mag-Moran	woven polishing cloth from 100 % new wool
SPT084	Mag-Napal	soft synthetic fibre cloth
SPT093	Mag-Chemal	soft synthetic fibre cloth, chemically resistant

New! Magnetic polishing cloths of Akasel

New!

Diamond polishing cloths, Ø 30

SPT088	Mag-Plaran	hard synthetic fibre cloth
SPT100	Mag-Paran	hard synthetic fibre cloth
SPT076	Mag-Plural	robust synthetic fibre cloth
SPT079	Mag-Daran	medium-hard synthetic silk cloth
SPT097	Mag-Ramda	medium-hard synthetic silk cloth
SPT082	Mag-Moran	woven polishing cloth from 100 % new wool
SPT085	Mag-Napal	soft synthetic fibre cloth
SPT094	Mag-Chemal	soft synthetic fibre cloth, chemically resistant

Polishing cloths in special sizes

Diamond polishing cloths, Ø 73 mm, self-adhesive, VE of 10 pieces

PTMM001	PT Plan MM	hard synthetic fibre cloth
PTMM022	PT Super Plan MM	very hard chemistry fibre cloth
PTMM025	PT Super Plan Perf. MM	very hard chemistry fibre cloth, perforated
PTMM004	PT Pan MM	hard synthetic fibre cloth
PTMM007	PT Silk MM	medium-hard synthetic silk cloth
PTMM067	PT Seda MM	medium-hard synthetic silk cloth
PTMM040	PT Mol MM	woven polishing cloth from 100 % new wool
PTMM010	PT Flock MM	soft, flocked polishing cloth
PTMM031	PT Nap MM	short pile velvet cloth, black
PTMM089	PT Skin MM	soft polyester cloth
PTMM016	PT Chem MM	soft synthetic cloth, chemically resistant
PTMM028	PT Chem Perforated MM	soft synthetic cloth, chemically resistant

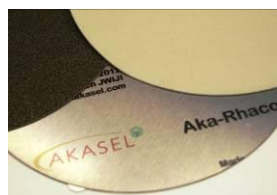
Diamond polishing cloths, Ø 98 mm, self-adhesive, VE of 10 pieces

PTMM002	PT Plan MM	hard synthetic fibre cloth
PTMM023	PT Super Plan MM	very hard chemistry fibre cloth
PTMM026	PT Super Plan Perf. MM	very hard chemistry fibre cloth, perforated
PTMM005	PT Pan MM	hard synthetic fibre cloth
PTMM008	PT Silk MM	medium-hard synthetic silk cloth
PTMM068	PT Seda MM	medium-hard synthetic silk cloth
PTMM041	PT Mol MM	woven polishing cloth from 100 % new wool
PTMM011	PT Flock MM	soft, flocked polishing cloth
PTMM032	PT Nap MM	short pile velvet cloth, black
PTMM090	PT Skin MM	soft polyester cloth
PTMM017	PT Chem MM	soft synthetic cloth, chemically resistant
PTMM029	PT Chem Perforated MM	soft synthetic cloth, chemically resistant

New! Adapter disc Aka-Rhaco New!

The adapter disc Aka-Rhaco can be used with rear-coated and self-adhesive polishing cloths as well as with coated SiC paper. It works well with our non-adhesive SiC paper!
Good adhesion, the supplies are easy to apply and remove.
Magnetically-adhesive onto all magnet carrier discs.

Gek001	Aka- Rhaco Ø 200 mm	1 piece
Gek004	Aka- Rhaco Ø 200 mm	2 pieces
Gek002	Aka- Rhaco Ø 250 mm	1 piece
Gek005	Aka- Rhaco Ø 250 mm	2 pieces
Gek003	Aka- Rhaco Ø 300 mm	1 piece
Gek006	Aka- Rhaco Ø 300 mm	2 pieces



Ø 350 mm on request!

New! Adapterdisc Aka-Rhaco flex New!

The adapter disc Aka-Rhaco-flex applies the same features as the Aka-Rhaco, but is attached on ferro-foil

On Ferro-foil:

Gek007	Aka- Rhaco flex Ø 200 mm	1 piece
Gek010	Aka- Rhaco flex Ø 200 mm	2 pieces
Gek013	Aka- Rhaco flex Ø 230 mm	1 piece
Gek014	Aka- Rhaco flex Ø 230 mm	2 pieces
Gek008	Aka- Rhaco flex Ø 250 mm	1 piece
Gek011	Aka- Rhaco flex Ø 250 mm	2 pieces
Gek009	Aka- Rhaco flex Ø 300 mm	1 piece
Gek012	Aka- Rhaco flex Ø 300 mm	2 pieces



Ø 350 mm on request!

Magnet adapter disc Aka-RONAN (MAGAS)

Magnet adapter – Aka-RONAN

The magnetic adapter is a metal disc with a polymer coating. It is particularly suitable for fixing self-adhesive sanding papers and polishing cloths and can be adapted to all magnetic systems.

- 3D - surface for easy adhesive bonding
- Corrosion resistant

MAS001	RONAN ø 200 mm	1 piece
MAS007	RONAN ø 200 mm	2 pieces
MAS003	RONAN ø 250 mm	1 piece
MAS008	RONAN ø 250 mm	2 pieces
MAS005	RONAN ø 300 mm	1 piece
MAS009	RONAN ø 300 mm	2 pieces

MAGFOL - magnetic foil

MAGFOL is a self-adhesive magnetic foil which is simply stuck onto a carrier disc. Now all magnetic adapter discs or polishing cloths can be fitted with a magnetic back.

MagFol001	MagFol Ø 200 mm
MagFol002	MagFol Ø 250 mm
MagFol003	MagFol Ø 300 mm

Ø 230 mm or Ø 350 mm on request!

Diamond - suspensions

Mono- and Polycrystalline

Diamond suspensions are used a lot these days, because of the widespread automation of sample preparation, the preferred medium for the dosage of diamonds.

Our suspensions are developed according to following aspects:

- Environmental friendliness
- Reproducible results
- Preferably short preparation times

High concentration Our diamond-suspensions have a concentration of 20 ct/l.

Overview of diamond suspensions Mono- and Polycrystalline

size	Median (50%)	Median Tolerance	Max (99%)	Poly	Mono
0.1	0.090	0.070 - 0.110	0.25	X	-
0.25	0.21	0.18 - 0.24	0.53	X	-
1	1.00	0.95 - 1.05	1.7	X	X
3	2.84	2.70 - 2.98	4.1	X	X
6	5.7	5.42 - 5.98	7.9	X	X
9	9.6	9.12 - 10.08	12.9	X	X
15	15.0	14.2 - 15.8	21.5	X	X

Monocrystalline diamond suspension water-based Aka-Mono

DSU-M001	Diamond Suspension Mono 15 µm 250 ml
DSU-M006	Diamond Suspension Mono 15 µm 1 l
DSU-M011	Diamond Suspension Mono 15 µm 2,5 l
DSU-M002	Diamond Suspension Mono 9 µm 250 ml
DSU-M007	Diamond Suspension Mono 9 µm 1 l
DSU-M012	Diamond Suspension Mono 9 µm 2,5 l
DSU-M003	Diamond Suspension Mono 6 µm 250 ml
DSU-M008	Diamond Suspension Mono 6 µm 1 l
DSU-M013	Diamond Suspension Mono 6 µm 2,5 l
DSU-M004	Diamond Suspension Mono 3 µm 250 ml
DSU-M009	Diamond Suspension Mono 3 µm 1 l
DSU-M014	Diamond Suspension Mono 3 µm 2,5 l
DSU-M005	Diamond Suspension Mono 1 µm 250 ml
DSU-M010	Diamond Suspension Mono 1 µm 1 l
DSU-M015	Diamond Suspension Mono 1 µm 2,5 l

Monocrystalline + diamond suspension water-based Aka-Mono + Monocrystalline diamond suspension with higher diamond concentration approx 40 ct/l

DSU-M016	Diamond Suspension Mono + 15 µm 250 ml
DSU-M021	Diamond Suspension Mono + 15 µm 1 l
DSU-M026	Diamond Suspension Mono + 15 µm 2,5 l
DSU-M017	Diamond Suspension Mono + 9 µm 250 ml
DSU-M022	Diamond Suspension Mono + 9 µm 1 l
DSU-M027	Diamond Suspension Mono + 9 µm 2,5 l
DSU-M018	Diamond Suspension Mono + 6 µm 250 ml
DSU-M023	Diamond Suspension Mono + 6 µm 1 l
DSU-M028	Diamond Suspension Mono + 6 µm 2,5 l
DSU-M019	Diamond Suspension Mono + 3 µm 250 ml
DSU-M024	Diamond Suspension Mono + 3 µm 1 l
DSU-M029	Diamond Suspension Mono + 3 µm 2,5 l
DSU-M020	Diamond Suspension Mono + 1 µm 250 ml
DSU-M025	Diamond Suspension Mono + 1 µm 1 l
DSU-M030	Diamond Suspension Mono + 1 µm 2,5 l

Excellent polishing results by adding of the newly developed Lubricant Clear, see page 47!

Polycrystalline diamond suspension water-based Aka-Poly

DSU-P001	Diamond Suspension Poly 15	µm 250 ml
DSU-P008	Diamond Suspension Poly 15	µm 1 l
DSU-P015	Diamond Suspension Poly 15	µm 2,5 l
DSU-P002	Diamond Suspension Poly 9	µm 250 ml
DSU-P009	Diamond Suspension Poly 9	µm 1 l
DSU-P016	Diamond Suspension Poly 9	µm 2,5 l
DSU-P003	Diamond Suspension Poly 6	µm 250 ml
DSU-P010	Diamond Suspension Poly 6	µm 1 l
DSU-P017	Diamond Suspension Poly 6	µm 2,5 l
DSU-P004	Diamond Suspension Poly 3	µm 250 ml
DSU-P011	Diamond Suspension Poly 3	µm 1 l
DSU-P018	Diamond Suspension Poly 3	µm 2,5 l
DSU-P005	Diamond Suspension Poly 1	µm 250 ml
DSU-P012	Diamond Suspension Poly 1	µm 1 l
DSU-P019	Diamond Suspension Poly 1	µm 2,5 l
DSU-P006	Diamond Suspension Poly 0,25	µm 250 ml
DSU-P013	Diamond Suspension Poly 0,25	µm 1 l
DSU-P020	Diamond Suspension Poly 0,25	µm 2,5 l
DSU-P007	Diamond Suspension Poly 0,1	µm 250 ml
DSU-P014	Diamond Suspension Poly 0,1	µm 1 l

**Polycrystalline + diamond suspension water-based Aka-Poly +
with higher diamond concentration approx. 40 ct/l****Polycrystalline diamond suspension water-based**

DSU-P025	Diamond Suspension Poly + 15	µm 250 ml
DSU-P030	Diamond Suspension Poly + 15	µm 1 l
DSU-P026	Diamond Suspension Poly + 9	µm 250 ml
DSU-P031	Diamond Suspension Poly + 9	µm 1 l
DSU-P027	Diamond Suspension Poly + 6	µm 250 ml
DSU-P032	Diamond Suspension Poly + 6	µm 1 l
DSU-P028	Diamond Suspension Poly + 3	µm 250 ml
DSU-P033	Diamond Suspension Poly + 3	µm 1 l
DSU-P029	Diamond Suspension Poly + 1	µm 250 ml
DSU-P034	Diamond Suspension Poly + 1	µm 1 l

Polycrystalline diamond suspension Aka-Poly water-free

DSUWF-P001	Diamond Suspension Poly 15	µm 250 ml
DSUWF-P008	Diamond Suspension Poly 15	µm 1 l
DSUWF-P002	Diamond Suspension Poly 9	µm 250 ml
DSUWF-P009	Diamond Suspension Poly 9	µm 1 l
DSUWF-P003	Diamond Suspension Poly 6	µm 250 ml
DSUWF-P010	Diamond Suspension Poly 6	µm 1 l
DSUWF-P004	Diamond Suspension Poly 3	µm 250 ml
DSUWF-P011	Diamond Suspension Poly 3	µm 1 l
DSUWF-P005	Diamond Suspension Poly 1	µm 250 ml
DSUWF-P012	Diamond Suspension Poly 1	µm 1 l
DSUWF-P006	Diamond Suspension Poly 0,25	µm 250 ml
DSUWF-P013	Diamond Suspension Poly 0,25	µm 1 l

Diamond suspensions alcohol-based

Monocrystalline diamond suspensions alcohol-based

DSUA-M006	Diamond Suspension Mono A	15 µm	1 l
DSUA-M007	Diamond Suspension Mono A	9 µm	1 l
DSUA-M008	Diamond Suspension Mono A	6 µm	1 l
DSUA-M009	Diamond Suspension Mono A	3 µm	1 l
DSUA-M010	Diamond Suspension Mono A	1 µm	1 l

Polycrystalline diamond suspensions alcohol-based

DSUA-P001	Diamond Suspension Poly A	15 µm	250 ml
DSUA-P008	Diamond Suspension Poly A	15 µm	1 l
DSUA-P002	Diamond Suspension Poly A	9 µm	250 ml
DSUA-P009	Diamond Suspension Poly A	9 µm	1 l
DSUA-P003	Diamond Suspension Poly A	6 µm	250 ml
DSUA-P010	Diamond Suspension Poly A	6 µm	1 l
DSUA-P004	Diamond Suspension Poly A	3 µm	250 ml
DSUA-P011	Diamond Suspension Poly A	3 µm	1 l
DSUA-P005	Diamond Suspension Poly A	1 µm	250 ml
DSUA-P012	Diamond Suspension Poly A	1 µm	1 l
DSUA-P006	Diamond Suspension Poly A	0, 25 µm	250 ml
DSUA-P013	Diamond Suspension Poly A	0, 25 µm	1 l

Diamond pastes

Overview diamond pastes Poly- and Monocrystalline

size	Median (50%)	Median Tolerance	Max (99%)	Poly	Mono
0.1	0.090	0.070 - 0.110	0.25	X	-
0.25	0.21	0.18 - 0.24	0.53	X	-
1	1.00	0.95 - 1.05	1.7	X	X
3	2.84	2.70 - 2.98	4.1	X	X
6	5.7	5.42 - 5.98	7.9	X	X
9	9.6	9.12 - 10.08	12.9	X	X
15	15.0	14.2 - 15.8	21.5	X	X

The diamond paste has a very high diamond concentration, 500ct/l. Even with using a small amount of this paste you can reach a high material removal. This is ideal suitable for polishing of the mobile component test.

Monocrystalline diamond Aka-paste Mono

DPA-M003	Diamond paste Mono	15 µm	10 g
DPA-M004	Diamond paste Mono	9 µm	10 g
DPA-M005	Diamond paste Mono	6 µm	10 g
DPA-M006	Diamond paste Mono	3 µm	10 g
DPA-M007	Diamond paste Mono	1 µm	10 g

Polycrystalline diamond Aka-paste Poly

DPA-P010	Diamond paste Poly	15 µm	10 g
DPA-P011	Diamond paste Poly	9 µm	10 g
DPA-P012	Diamond paste Poly	6 µm	10 g
DPA-P013	Diamond paste Poly	3 µm	10 g
DPA-P014	Diamond paste Poly	1 µm	10 g
DPA-P015	Diamond paste Poly	0,25 µm	10 g

DiaPastic

DiaPastic for the simple application of diamond paste on polishing cloths in the stationary and mobile Materialography!

Advantages over conventional diamond paste syringes:

- Clean handling
- Better distribution on the polishing cloths
- Easy transporting
- 20 g bundle
- Rounded edge protects the cloth surface

DiaPastic has a very high diamond concentration, 500 ct/l.
Therefore takes place even with a small amount of a high material removal.



DiaPastic Monocrystalline

DPA-M010	DiaPastic Mono	15 µm	20 g
DPA-M011	DiaPastic Mono	9 µm	20 g
DPA-M012	DiaPastic Mono	6 µm	20 g
DPA-M013	DiaPastic Mono	3 µm	20 g
DPA-M014	DiaPastic Mono	1 µm	20 g

DiaPastic Polycrystalline

DPA-P019	DiaPastic Poly	15 µm	20 g
DPA-P020	DiaPastic Poly	9 µm	20 g
DPA-P021	DiaPastic Poly	6 µm	20 g
DPA-P022	DiaPastic Poly	3 µm	20 g
DPA-P023	DiaPastic Poly	1 µm	20 g
DPA-P024	DiaPastic Poly	0,25 µm	20 g

New!

Aka-Stick

New!

The new Diamond Aka-stick is mainly used for mobile preparation and fast application of diamond paste on the polishing cloth.

A stick is easier to use as a paste and the polishing material can also be applied during the polishing process. Our Diamond Stick is compatible with water-, glycol- and ethanol-based lubricants. It contains less than 0.1% water and therefore it is perfectly suited for water-free preparation. The high diamond concentration of 250 ct / l ensures high removal rates.

Aka-Stick Monocrystalline

DST-M001	Aka-Stick Mono	9 µm	20 ml
DST-M002	Aka-Stick Mono	6 µm	20 ml
DST-M003	Aka-Stick Mono	3 µm	20 ml
DST-M004	Aka-Stick Mono	1 µm	20 ml

Aka-Stick Polycrystalline

DST-P001	Aka-Stick Poly	9 µm	20 ml
DST-P002	Aka-Stick Poly	6 µm	20 ml
DST-P003	Aka-Stick Poly	3 µm	20 ml
DST-P004	Aka-Stick Poly	1 µm	20 ml
DST-P005	Aka-Stick Poly	0,25 µm	20 ml

Diamond sprays

The diamond spray has replaced the paste almost completely. There have been many attempts to produce better and more effective suspensions, but the combination of diamond spray and an alcohol-based Lubricant is still considered the best alternative. Our spray is developed to:

- Reproducible results
- Preferably short preparation times
- Water-free polishing
- Environmental friendliness

Environmental friendliness

The spray consists of ethanol (99.9%), diamonds and environmentally friendly CO₂, that instead of the normally used butane-propane mix, which is actually a lighter gas, is used as a propellant gas. The ethanol evaporates quickly and the diamonds are freely accessible. The spray is the dosage form with the most effective removal.

High concentration

The material removal is increased together with the growing concentration of diamonds, but only up to a certain limit. A further addition of diamonds has only a low effect on the removal. All our diamond sprays have a concentration of 26.5 ct/l.

Water-free

The products contain less than 0.1% water. Therefore, the spray can be used very well with the Lubricant Blue, if you need a water-free polishing.

Monocrystalline diamond spray Aka-spray Mono

DSP-M001	Diamond Spray Mono	15	µm	150 ml
DSP-M002	Diamond Spray Mono	9	µm	150 ml
DSP-M003	Diamond Spray Mono	6	µm	150 ml
DSP-M004	Diamond Spray Mono	3	µm	150 ml
DSP-M005	Diamond Spray Mono	1	µm	150 ml

Polycrystalline diamond spray Aka-spray Poly

DSP-P001	Diamond Spray Poly	15	µm	150 ml
DSP-P002	Diamond Spray Poly	9	µm	150 ml
DSP-P003	Diamond Spray Poly	6	µm	150 ml
DSP-P004	Diamond Spray Poly	3	µm	150 ml
DSP-P005	Diamond Spray Poly	1	µm	150 ml
DSP-P006	Diamond Spray Poly	0,25	µm	150 ml

Diamond spray NH – Pump spray without compressed air

The alternative to the traditional diamond spray - no compressed air. Therefore, **not flammable**, but with the same properties and with **higher diamond concentration** (30 ct/l instead of 26.5 ct/l)!

Monocrystalline diamond spray NH

DSP-M006	Diamond Spray Mono NH	15	µm	150 ml
DSP-M007	Diamond Spray Mono NH	9	µm	150 ml
DSP-M008	Diamond Spray Mono NH	6	µm	150 ml
DSP-M009	Diamond Spray Mono NH	3	µm	150 ml
DSP-M010	Diamond Spray Mono NH	1	µm	150 ml

Polycrystalline diamond spray NH

DSP-P008	Diamond Spray Poly NH	15	µm	150 ml
DSP-P009	Diamond Spray Poly NH	9	µm	150 ml
DSP-P010	Diamond Spray Poly NH	6	µm	150 ml
DSP-P011	Diamond Spray Poly NH	3	µm	150 ml
DSP-P012	Diamond Spray Poly NH	1	µm	150 ml
DSP-P013	Diamond Spray Poly NH	0,25	µm	150 ml

Two-in-One diamond suspensions

- Time saving in the preparation is up to 50% possible -

A big advantage is that you have to handle one liquid only instead of two, suspension and lubricant. **DiaDoublo** is a ready mix of lubricant and suspension, permanently stable, so that reproducible results are guaranteed. The increased removal of our lubricant was retained completely, so you can expect up to **30 – 50%** shorter preparation times (**DiaDoublo Poly**). Use our practical pump spray bottle for perfect manual dosage. Also available with automatic dosing system for lubricants. This saves room for several grain sizes.

- **Short preparation time**
- **Reproducible results**
- **Full flexibility; adjust the diamond concentration with extender or suspension**
- **Little impact of overdose**
- **Water-based, no labeling obligation**
- **Biodegradable**

The complete program

Based on our lubricant and suspensions we have developed a combination product that makes the dosage very easy. All grain sizes, mono- and polycrystalline, are also available as **DiaDoublo**. Unlike other mixing products **DiaDoublo** adapts to the surface. So you need no separate **DiaDoublo** for polishing and grinding surface, but one can be content with the usual grain sizes. Unlike other 2-in-1 products **DiaDoublo** contains pure mono- or polycrystalline diamonds.

Diamond concentration customize

DiaDoublo is with our suspensions and extenders complete compatible, so you can customize **DiaDoublo** if you want to change the properties. Dilute with extender, or increase the concentration of diamond by adding diamond suspension.

Little impact of overdose

Because of the low viscosity of the lubricating film the excessive **DiaDoublo** spreads quickly to the bedding layer. This reduces the hydroplaning effect and the negative effects of an overdose are limited to an increased consumption.

Environmental friendliness

DiaDoublo is prepared with a conservation system that is gentle to the skin. It is free of boric acid, amines and nitrite. **DiaDoublo** also contains no additives of chlorine- and sulfur-base.

Reproducible results

Many factors become important, if short preparation time and reproducibility is expected.

Permanent floating diamonds: **DiaDoublo** keeps the abrasive in a homogeneous mixture floating. If the diamonds start to sink to the ground, the dosage and the size of the diamonds begin to vary, while the bottle is emptied gradually. The consequences are varying polish results. Both the removal of material and the crack samples vary, as all diamonds sink to the ground, but the heavy (large) diamonds first. Our **DiaDoublos** keep the diamonds permanently floating and therefore the polishing results are the same every time.

Controlled suspension: Small particles - the same goes for diamonds - have a tendency to form aggregates, if the suspension process is not performed correctly. We control the product and ensure that our specifications are maintained.

Short preparation times

Low grain sizes distribution: If durable abrasives such as diamonds are used, it is important that the grain size distribution is bounded as much as possible. Large particles scrape stronger and they cause a longer preparation time. Small particles have not the necessary removal so that they extend the current preparation phase.

Therefore, we use the most strictly sorted diamonds, which are commercially available. Each batch is sorted rigorously and the variation from batch to batch is minimal.

Concentration: The diamond concentration of **DiaDoublo Poly** comes up to a mixture of suspension and lubricant of 1:2, in order to combine high abrasion with optimal surface.. **DiaDoublo Mono** has a concentration corresponding to a mixing ratio of 1:3, to obtain a good efficiency.

Overview DiaDoublo

size	Median (50%)	Median Tolerance	Max (99%)	Poly	Mono
0.1	0.090	0.070 - 0.110	0.25	X	-
0.25	0.21	0.18 - 0.24	0.53	X	-
1	1.00	0.95 - 1.05	1.7	X	X
3	2.84	2.70 - 2.98	4.1	X	X
6	5.7	5.42 - 5.98	7.9	X	X
9	9.6	9.12 - 10.08	12.9	X	X
15	15.0	14.2 - 15.8	21.5	X	X

DiaDoublo – Monocrystalline

DDO-M001	DiaDoublo Mono	15 µm	500 ml
DDO-M006	DiaDoublo Mono	15 µm	5 l
DDO-M002	DiaDoublo Mono	9 µm	500 ml
DDO-M007	DiaDoublo Mono	9 µm	5 l
DDO-M003	DiaDoublo Mono	6 µm	500 ml
DDO-M008	DiaDoublo Mono	6 µm	5 l
DDO-M004	DiaDoublo Mono	3 µm	500 ml
DDO-M009	DiaDoublo Mono	3 µm	5 l
DDO-M005	DiaDoublo Mono	1 µm	500 ml
DDO-M010	DiaDoublo Mono	1 µm	5 l

DiaDoublo – Polycrystalline

DDO-P001	DiaDoublo Poly	15 µm	500 ml
DDO-P006	DiaDoublo Poly	15 µm	5 l
DDO-P002	DiaDoublo Poly	9 µm	500 ml
DDO-P007	DiaDoublo Poly	9 µm	5 l
DDO-P003	DiaDoublo Poly	6 µm	500 ml
DDO-P008	DiaDoublo Poly	6 µm	5 l
DDO-P004	DiaDoublo Poly	3 µm	500 ml
DDO-P009	DiaDoublo Poly	3 µm	5 l
DDO-P005	DiaDoublo Poly	1 µm	500 ml
DDO-P010	DiaDoublo Poly	1 µm	5 l

DiaDoublo – Monocrystalline + (= DiaDoublo Mono +)

DDO-M011	DiaDoublo Mono +	15 µm	500 ml
DDO-M016	DiaDoublo Mono +	15 µm	5 l
DDO-M012	DiaDoublo Mono +	9 µm	500 ml
DDO-M017	DiaDoublo Mono +	9 µm	5 l
DDO-M013	DiaDoublo Mono +	6 µm	500 ml
DDO-M018	DiaDoublo Mono +	6 µm	5 l
DDO-M014	DiaDoublo Mono +	3 µm	500 ml
DDO-M019	DiaDoublo Mono +	3 µm	5 l
DDO-M015	DiaDoublo Mono +	1 µm	500 ml
DDO-M020	DiaDoublo Mono +	1 µm	5 l

DiaDoublo – Polycrystalline + (= DiaDoublo Poly +)

DDO-P011	DiaDoublo Poly +	15 µm	500 ml
DDO-P016	DiaDoublo Poly +	15 µm	5 l
DDO-P012	DiaDoublo Poly +	9 µm	500 ml
DDO-P017	DiaDoublo Poly +	9 µm	5 l
DDO-P013	DiaDoublo Poly +	6 µm	500 ml
DDO-P018	DiaDoublo Poly +	6 µm	5 l
DDO-P014	DiaDoublo Poly +	3 µm	500 ml
DDO-P019	DiaDoublo Poly +	3 µm	5 l
DDO-P015	DiaDoublo Poly +	1 µm	500 ml
DDO-P020	DiaDoublo Poly +	1 µm	5 l

DiaDoublo – Polycrystalline water-free

DDOWF-P001	DiaDoublo Poly	15 µm	water-free 500 ml
DDOWF-P002	DiaDoublo Poly	9 µm	water-free 500 ml
DDOWF-P003	DiaDoublo Poly	6 µm	water-free 500 ml
DDOWF-P004	DiaDoublo Poly	3 µm	water-free 500 ml
DDOWF-P005	DiaDoublo Poly	1 µm	water-free 500 ml
DDOWF-P006	DiaDoublo Poly	0,25 µm	water-free 500 ml

Lubricants

Based on the traditional lubricants, we have developed new versions with high efficiency and low environmental stress during polishing.

- Little impact of overdose
- Conservation system without amines, nitrites, and boric acid
- Completely biodegradable

The complete program

With the newest knowledge in the development of cooling lubricants, we have produced a series of identical lubricants, differing only in the thickness of the lubricating film. Lubricant Green has the thinnest lubricant film and is used when the removal is most important. Lubricant Red has the thickest film for the final polishing when the finish becomes important. The Lubricant Yellow is in the middle and is used when the Lubricant Green is too aggressive. The lubricants are complete compatible with each other. Therefore you can create your own unique mixture, whose properties are adapted especially to your own needs. For example you can mix yellow with green or yellow with red.

Environmental friendliness

Lubricants Red, Green and Yellow are produced with a conservation system that is mild to the skin. It is free of boric acid, amines and nitrite. Moreover, no lubricant contains additives of chlorine- and sulfur base. Lubricant Blue based on pure ethanol, and contains no compulsory labeling material for lubricating film-formation. Therefore, it is marked only with Fx (combustible).

Water-free

Lubricant Blue contains at most 0.1% water. Therefore, you can use it well with the diamond-spray if you need a water-free polishing.

Lubricants alcohol-based

LU-B001	Lubricant Blue 1 l	for water-free sample preparation, thin
LU-B002	Lubricant Blue 5 l	for water-free sample preparation, thin
LU-B003	Lubricant Blue 10 l	for water-free sample preparation, thin
LU-GE001	Lubricant Yellow 1 l	for water-free sample preparation, thin
LU-GE002	Lubricant Yellow 5 l	for water-free sample preparation, thin
LU-BR001	Lubricant Brown 1 l	for water-free sample preparation, medium
LU-BR002	Lubricant Brown 5 l	for water-free sample preparation, medium

Lubricants hydrous

LU-G001	Lubricant Green 1 l	for universal sample preparation, thin
LU-G002	Lubricant Green 5 l	for universal sample preparation, thin
LU-G004	Lubricant Green 25 l	for universal sample preparation, thin
LU-Y001	Lubricant Yellow 1 l	for universal sample preparation, medium
LU-Y002	Lubricant Yellow 5 l	for universal sample preparation, medium
LU-Y004	Lubricant Yellow 25 l	for universal sample preparation, medium
LU-R001	Lubricant Red 1 l	for universal sample preparation, thick
LU-R002	Lubricant Red 5 l	for universal sample preparation, thick
LU-R004	Lubricant Red 25 l	for universal sample preparation, thick

Special-Lubricant for monocrystalline + diamond suspension

LU-C001	Aka-Lube Clear+ 1 l
LU-C002	Aka-Lube Clear+ 5 l

Lubricants water-free

LU-CWF001	Aka-Lube Clear waterfree 1 l	New!
LU-CWF002	Aka-Lube Clear waterfree 5 l	New!

Diamond lubricants on oil based, water-free

LU-O001	Preparation oil 500 ml
LU-O002	Preparation oil 1 l
LU-O003	Preparation oil 2,5 l
LU-O004	Preparation oil 5 l

Special water-based lubricant for mixing of individual two-in-one suspensions on request. Further information can be found on our website and in the online shop!

Silica - suspensions

By the final polishing of certain materials, especially metallic type, silica suspensions have displaced the alumina suspensions. This is mainly due to the different hardness, because silica has a Vickers hardness of 1100 HV, Alumina in contrast, approx. 1800 HV. For the polishing of e.g. ceramic materials you prefer usually diamonds. We have a large range of Silica – suspensions. They are tuned to different tasks for polishing different materials.

- Different grain structures
- Acid and basic reactive suspensions in the pH range from 3.5 to 10
- Grain size distributions of 0.2 µm to 0.050 µm (200 - 50 nm)
- A unique system to prevent the crystallization
- Water-free suspensions

Silica - suspensions were originally developed for the polishing of silicon wafers. The mode of operation of this silica-suspension is chemically-mechanically. The sample surface will be etched; the resulting coating is removed with the soft silica, leaving the surface almost free of deformation. Just as in wafer polishing, this is best achieved when the suspension is added just before use an oxidizing agent. Often you use hydrogen peroxide or acids / bases in combination with a salt. You take an etching agent which is often used simultaneously with the etching of the finished object. The oxidation- or etching agent must be added just before use, because it can trigger changes in the silica-suspension such flocculation or coagulation.

Crystallization

One problem of the Silica-suspensions is the crystal precipitation after the application. If the liquid of the suspension evaporated after the final preparation, the Silica-content concentrates. Thus there is a precipitation of crystals that cannot be resolved by the addition of a new suspension. The crystals are embedded in the polishing cloth, which can no longer be used.

We have developed a very effective method to stop the crystal precipitation. This method reduces the water evaporation, and with our Colloidal silica it is other than before possible to dissolve the precipitated crystals once again. Thus extends the lifetime of the polishing cloth!

Overview Final Polishing suspensions

Description	Grain size	pH-value	Concentration gr/l
Colloid	0,05	10	585
Fumed, acid	0,12	5	238
Fumed, alkaline	0,12	10	238
Fumed, alkaline	0,2	10	238
Fumed, water-free	0,2	-	240

OxyPol001	Colloidal Silica Suspension 50 nm Alkaline 1 l
OxyPol002	Colloidal Silica Suspension 50 nm Alkaline 5 l
OxyPol003	Fumed Silica Suspension 0,12 µm Acidic 1 l
OxyPol004	Fumed Silica Suspension 0,12 µm Acidic 5 l
OxyPol005	Fumed Silica Suspension 0,12 µm Alkaline 1 l
OxyPol006	Fumed Silica Suspension 0,12 µm Alkaline 5 l
OxyPol007	Fumed Silica Suspension 0,2 µm Alkaline 1 l
OxyPol008	Fumed Silica Suspension 0,2 µm Alkaline 5 l
OxyPol009	Fumed Silica Suspension 0,2 µm Water-free 1 l
OxyPol010	Fumed Silica Suspension 0,2 µm Water-free 5 l
OxyPol011	Aluminum oxide polishing agents for metallic and nonmetallic materials such as synthetics, 2 µm, pH: 3.4 1l
OxyPol012	Aluminum oxide polishing agents for metallic and nonmetallic materials such as synthetics, 2 µm, pH: 3.4 5l

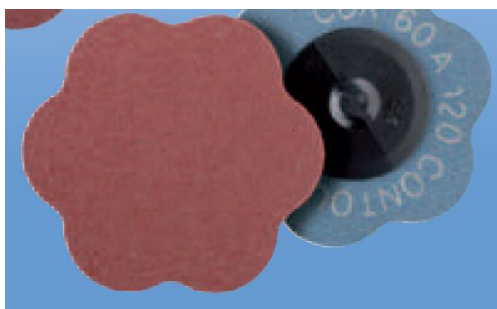
Alumina suspension (aluminium oxide- suspension, pH-value: neutral)

TONPOL001	Alumina Suspension grain size 1,00 µm	1000 ml
TONPOL002	Alumina Suspension grain size 0,70 µm	1000 ml
TONPOL003	Alumina Suspension grain size 0,25 µm	1000 ml

Larger quantities on request!

Mobile Materialography

MobMat008	Power Lock Disc Set Set consisting of: 1 adapter plate for Power Discs, 5 Power Lock Discs K 80, 5 Power Lock Discs K 180, 5 Power Lock Discs Fine grinding fleece, 5 Power Lock Discs Pre-polishing fleece, 25 Power Lock Disc PT Nap and 25 Power Lock Disc PT Silk
MobMat001	Adapter plate for Power Lock Discs Adapter plate for problem free and rapid changing of grinding and polishing discs Shaft diameter 6 mm Other shaft diameter on request!
MobMat002	Power Lock Disc K 80 5 pieces Zircon corundum grinding disc on fiber- and/or tissue carrier in grain size of 80 Ø 38 mm
MobMat003	Power Lock Disc K 180 5 pieces Zircon corundum grinding disc on fiber- and/or tissue carrier in grain size of 180 Ø 38 mm
<p style="text-align: center;">Grinding bloom for optimal grinding of radii and fillets on welded components</p>	
MobMat038	Grinding bloom for Power Lock Disc K 60 5Stck. Corundum grinding wheel on fiber respectively fabric carrier in grain size 60 Ø 55 mm
MobMat039	Grinding bloom for Power Lock Disc K 80 5Stck. Corundum grinding wheel on fiber respectively fabric carrier in grain size 80 Ø 55 mm
MobMat040	Grinding bloom for Power Lock Disc K 120 5Stck. Corundum grinding wheel on fiber respectively fabric carrier in grain size 120 Ø 55 mm
MobMat041	Grinding bloom for Power Lock Disc K 180 5Stck. Corundum grinding wheel on fiber respectively fabric carrier in grain size 180 Ø 55 mm



Sic- wet grinding paper for the mobile component examination

MobMat029	grain size	80, 196 µm	
MobMat017	grain size	120, 125 µm	
MobMat018	grain size	240, 65 µm	
MobMat019	grain size	320, 46 µm	
MobMat030	grain size	400, 35 µm	
MobMat020	grain size	500, 30 µm	Ø 30 mm, self-adhesive, VE 100 sheet
MobMat031	grain size	600, 25 µm	
MobMat021	grain size	800, 22 µm	
MobMat032	grain size	1000, 18 µm	
MobMat022	grain size	1200, 15 µm	
Optimal use with plastic adapter or rubber plate			
MobMat004	Power Lock Disc Fine grinding fleece, 5 pieces		
	Grinding disc from pressed grinding fleece for the fine grinding stage, Ø 38 mm		
MobMat005	Power Lock Disc Pre-polishing fleece, 5 pieces		
	Grinding disc from pressed grinding fleece for the pre-polishing stage, Ø 50 mm		
MobMat007	Power Lock Disc PT Silk 25 pieces		
	Polishing cloth for the polishing with 3 µm diamond products, Ø 30 mm		
MobMat014	Power Lock Disc PT Mol 25 pieces		
	Polishing cloth for the polishing with 6 µm or 3 µm diamond products, Ø 30mm		
MobMat006	Power Lock Disc PT Nap 25 pieces		
	Polishing cloth for Final polishing with 1 µm diamond products, Ø 30 mm		
MobMat037	Power Lock Disc PT Filz 25 pieces		
	Polishing cloth for Final polishing with 1 µm diamond products, Ø 30 mm		
Other polishing cloths on request!			
MobMat024	Power Lock Disc plastic adapter 10 pieces		
	Plastic adapter disc with thread for absorption of self-adhesive SiC Paper or polishing cloths, Ø 30 mm		
MobMat025	Glass slide 50 pieces		
	Glass slide for the fixing of print foils with 20 mm matt-edge for markings Size: 76 x 26 x 1 mm		

New!

Mobile Component Microscope

New!

The TKM is a microscope for ambulatory (portable) Metallography. It is mainly intended for the on-site viewing and recording of metallographic sections of large parts (for example in foundries) and outdoor facilities (power plants, chemical plants, etc.) as well as for macro examinations (visual on-site inspection).

TKM has an autonomous LED lighting that can also be used coaxial (picture left) as well as sidewise. The LED lights are powered by a rechargeable battery box or operated wirelessly with batteries. The rechargeable battery box ensures operation for several hours. A digital camera serves for documentation and saves for example the production of imprint foils.

TKM-S Transportable Metallographic Microscope TKM Standard

- Stand: round foot, straight lens tube
 - Incident light - objective 10X, planachromatic
 - WF-ocular 10X
 - 2 LED lights, white, with button cells (wireless)
 - Illumination coaxial / oblique
 - In form-foamed transport case
- Possible magnifications with optional components: 40X - 80X - 100X - 200X - 400X
 Incident light-objective 4x planachromatic
 Incident light-objective 20x planachromatic
 Photo-ocular plan-compensated
 Digital Camera for TKM



MobMat026	Transport / Storage containers for glass slide Suitable for the storage and transport of up to 10 glass slides. Stable construction, screw cap with nipple for sealing. With the opened cap the glass slides jut out about 10 mm allowing easy withdrawal.
MobMat027	Storage container for glass slide Suitable for the storage of 50 glass slides. - Of high-quality polystyrene - With numbering in the base - Stackable - Dust proof Available in the following colours: white, blue, green, red, black, yellow and turquoise Please indicate required colour when ordering

Surfaces – reprint mass

Reprint 1000 is a high-viscous mould material made from additional cross-linked vinyl silicones. It is especially suitable for the non-destructive analyses of microstructures and three dimensional structures such as for example fracture surfaces

Reprint 1000 shows good hydrophilic qualities which improve wetting ability and mould accuracy.

Reprint 1000 - Cartouche and a mixing spout are loaded onto the mixing pistol. The mixing pistol applies the reprint mass uniformly onto the spot to be examined. Since the reprint mass consists of quick hardening two-component-silicone the print can be dissolved after approx. 3-4 minutes and evaluated immediately.

Technical Data:

Temperature range: - 15 to + 250 ° C

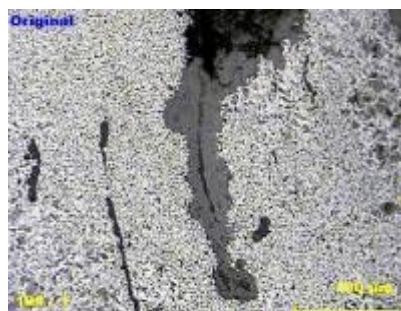
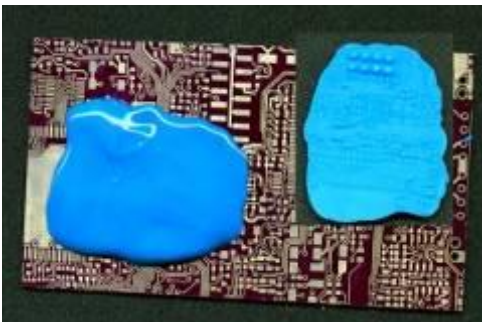
Resolution: up to 0.1 µm

Processing time: 3 - 4 minutes

Contraction after 24 hrs: less than 0.1 %

Deformation under pressure: 1.7 %

Practical examples: Macro and micro investigations



Reprint 2000 is a ductile, additional cross-linked high-precision reprint material of vinyl-polysiloxane base.

Reprint 2000 is particularly well suited to form of larger components contours, fracture surfaces or similar. From the resulting negative-print you can easily produce a positive by casting a suitable cold embedding agent. Thus, in the area of damage events replicas are prepared easily for archiving, examination or other documentation.

Technical Data:

Resolution: up to 0.1 µm

Processing time: 3 - 4 minutes

Recommended time for outpouring: after 1 hour to 14 days!

Linear dimensional change: - 0.15%

Shelf life at 23°C - 25°C, relative humidity: up to a maximum of 2 years

Surfaces – reprint mass



MobMat009	Reprint Set Set consisting of: 1 Mixing pistol 2 Cartouches à 50 ml Reprint 1000 30 Mixing spouts 30 top piece spouts
MobMat010	Reprint 1000 Universally usable 2-component-silicone reprint mass for the investigation of micro- and three dimensional structures 1 Cartouche à 50 ml
MobMat013	Mixing pistol Mixing pistol for Reprint 1000 (50 ml cartouches)
MobMat011	Mixing spout 30 pieces Mixing spout for Reprint 1000
MobMat012	Top piece spout 30 pieces Top piece spouts for mixing spout

Reprint 2000

MobMat028	Reprint 2000 Ductile, additional cross-linked high-precision reprint material on vinyl polysiloxane base. For the production of 3D- surface reprints with excellent surface reproduction. 1 x 450 ml (690 g) of basis mass and 1 x 450 ml (690 g) hardening mass
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MobMat033	Reprint 3000 D Light-curing, low viscosity reprint mass for surface reprints (such as structure reprints), curing with UV-LED lamp , in a spray, including 5 application cannulas, 3g
MobMat034	Reprint 3000 D Set Consisting of 4 sprays at 3 g, 20 application cannulas, 50 pieces glass slide, 1 UV-LED lamp with 21 LEDs with batteries and a practical transport box
MobMat035	UV-LED-lamp with 21 LEDs including batteries for the curing of Reprint 3000 D

Reprint foil for mobile component examination

MobMat015	Acetate foil 30 µm	100 x 150 mm	20 sheet
MobMat016	Acetate foil 95 µm	125 x 125 mm	20 sheet
MobMat036	Acetate foil 95 µm	100 x 150 mm	20 sheet

Etching agents for mobile component examination

ÄtzM024	Eagle – Etching e.g. for etching of e.g. Cr-Ni steels and welded joints	250 ml
ÄtzM025	Kalling II e.g. for etching of e.g. Ni-based alloys and high alloyed steels	250 ml
ÄtzM026	3% alcoholic nitric acid e.g. for etching of low alloyed carbon steels	250 ml
ÄtzM028	25% alcoholic hydrochloric acid e.g. for etching of e.g. steels	250 ml

Other etching agents on request!

Small bundles have the advantage that they can be transported safely and facilitate handling on-site!

Solvents and rubbing alcohol for mobile component examination

ÄtzM027	Acetone inter alia for wetting the triacetate foil	250 ml
Clean007	Rubbing alcohol 99.9% denatured ethanol	250 ml

Small bundles have the advantage that they can be transported safely and facilitate handling on-site!

Accessories

Measuring bottles with spray top for diamond suspensions and lubricants

DFL001	Measuring bottles 300 ml 1 piece
DFL002	Measuring bottles 300 ml 3 pieces
DFL003	Measuring bottles 500 ml 1 piece
DFL004	Measuring bottles 500 ml 3 pieces

Zub009	Cleaning cotton wool 200 g Cotton wool from 100% cotton for grinding cleaning
Zub010	Cotton wool pads 200 pieces

Cotton wool dispenser on request!

Rubbing alcohol

Clean001	Ethanol denatured Rubbing alcohol 99 % (Ethanol)	1,0 liter bundle
Clean002	Rubbing alcohol 99 % (Ethanol)	5,0 liter bundle
Clean003	Rubbing alcohol 99 % (Ethanol)	10,0 liter bundle
Clean004	Rubbing alcohol 99 % (Ethanol)	5 x 5 liter bundle
Clean005	Clean Spray 0,5 l	
Clean006	Clean Refill 5 l	
Clean008	Clean Spray water-free 0,5 l no dangerous goods, alternative to rubbing alcohol	
Clean009	Clean water-free Refill 5 l	

Etching agents

ÄtzM001	Adler – Etching For etching of e.g. Cr-Ni steels and welded joints	1,0 liter
ÄtzM002	3 % alcoholic nitric acid	1,0 liter
ÄtzM003	3 % alcoholic nitric acid	2,5 liter
ÄtzM008	3 % alcoholic nitric acid	5,0 liter
ÄtzM004	5 % alcoholic nitric acid	1,0 liter
ÄtzM005	5 % alcoholic nitric acid	2,5 liter
ÄtzM009	5 % alcoholic nitric acid	5,0 liter
ÄtzM006	5 % hydrous nitric acid	1,0 liter
ÄtzM007	5 % hydrous nitric acid	2,5 liter
ÄtzM010	5 % hydrous nitric acid	5,0 liter
ÄtzM013	Copper ammonium chloride and 100 ml of ammonia For etching of e.g. Cu und Cu-alloys	
ÄtzM023	Etching agent for Al- soldered joints For the visualization of soldered joints in Al and Al – alloys and the microstructure of some aluminum alloys. Caution: contains Hydrofluoric acid!	1,0 liter
ÄtzM014	V2A Mordant For etching of e.g. Chrome-nickel steels	1,0 liter
ÄtzM015	5 % alcoholic picric acid For etching of e.g. soft annealed carbon steels	1,0 liter
ÄtzM016	Beraha II stock solution 1,0 liter and 100 g potassium disulphide Colour etching agents for e.g. high alloyed steels	
ÄtzM017	Cold sated potassium hydroxide solution For Etching of e.g. Al and Al-alloys	1,0 liter
ÄtzM019	10 % hydrous nitric acid	1,0 liter
ÄtzM029	Primary etching agent by Le Chatelier e.g. for the development of the microstructure of steel	1,0 Liter
ÄtzM030	Etching agent by Oberhoffer For cast iron, steel liquation and stretcher strain marks	1,0 Liter
ÄtzM031	15 % sodium hydroxide solution For aluminum and aluminum alloys macro	1,0 Liter
ÄtzM032	10 % sodium hydroxide solution e.g. for the electrolytic etching for the detection of ferrite and sigma phase	1,0 Liter
ÄtzM033	Etching agent by Fuß For aluminum and aluminum alloys micro	1,0 Liter
ÄtzM034	Kalling II e.g. for etching of Ni-base alloys and high alloyed steels	1,0 Liter
ÄtzM035	Etching agent by Bechet-Beaujard For the visualization of the former austenite grain boundaries in low alloyed heat treatable steels	1,0 Liter

Other etching agents on request!

Electrolytic polishing and etching agents

ÄtzM011	Electrolyte CT- A2	1,0 liter
	Steel, high speed steel, aluminum and aluminum alloys, stainless steel	
ÄtzM020	Electrolyte CT- A3	1,0 liter
	Stainless steels, martensitic steels, molybdenum, titanium, zirconium, vanadium	
ÄtzM021	Electrolyte CT- AC2	1,0 liter
	Cast iron, magnesium, magnesium alloys, nickel, Nimonic, carbon steels, stainless steels, beryllium	
ÄtzM022	Electrolyte CT- D2	1,0 liter
	Copper, copper alloys, brass	
ÄtzM012	CT – Barker – Etching agent	1,0 liter
	Electrolytic etching of pure Al, Al-Zn-Al-Mn, Al-Mg-Si, Al-Zn-Mg- and Al-Mn-Mg- alloys	
ÄtzM032	10 % sodium hydroxide solution	1,0 Liter
New!	e.g. for the electrolytic etching for the detection of ferrite and sigma phase	

Other electrolytes on request!

Etching tongs

The etching tongs are set up so that the etching of round samples does not present a problem. Since the plastic-coated gripping surfaces extend around the sample, slipping is prevented – a problem that occurs with conventional tongs with straight gripping surfaces. Thus a secure etching is guaranteed.

Old version



New version!

- ÄtzZ001 **Type A** curved wraparound grip surfaces for samples of Ø 25 mm to 30 mm
 ÄtzZ002 **Type B** curved wraparound grip surfaces for samples of Ø 30 mm to 40 mm
 ÄtzZ003 **Type C** curved wraparound grip surfaces for samples of Ø 50 mm to 70 mm

Etching bowls

- ÄtzS001 **Etching bowl**, plastic, with screw cap, approx. Ø 100 mm, and 50 mm high. Inside Ø 90 x 45 mm

Embedding accessories

- Zub002 **Mixing pot 0,2 l 10 pieces**
 mixing pot 0.2 l, thin-walled card, white, one-sided PE coated (inside), 10 pieces
- Zub001 **Mixing spatula, wood 10 x 114 mm 50 pieces**
- TrenM001 **TrenM 400 ml (silicon-free!)**
 Mould release agent for press- and embedding forms
- Zub015 **Pressure pot 4 l**
 To blow- and pore-free curing of CEM3020, Compressed-air connection(2 bar) or compressor required
 Dimensions: Ø 195 mm, height: 185 mm, including 2 m filling hose

Latex gloves

Zub004	Latex gloves powder-free size L 100 pieces Single use latex gloves, powder-free
Zub003	Latex gloves powder-free size M 100 pieces Single use latex gloves, powder-free
Zub005	Latex gloves powder-free size S 100 pieces Single use latex gloves, powder-free

New!

Nitrile gloves

New!

Zub016	Nitrile gloves size L 100 pieces Single use Nitrile gloves
Zub017	Nitrile gloves size M 100 pieces Single use Nitrile gloves
Zub018	Nitrile gloves size S 100 pieces Single use Nitrile gloves

Adhesive spray - removable

Adhesive spray for attaching non self-adhesive SiC-Paper onto adapter discs.
Very easy to use and disposal of adhesive residues without solvent possible.

HSK001	Adhesive spray can 400 ml
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Sealing lacquer

Lac001	Protective lacquer for spraying onto ready-prepared materialographic samples. Easy analysis by microscopy Removable with acetone 400 ml spray can
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Accessories Target Preparation

New!

TargetStop

New!

TS001	TargetStop 40 Hand specimen holder for target preparation for specimens Ø 40 mm Available from February 2013
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Equipment and accessories for thin section preparation

SP Thin Section Machine for professional execution SystemAbele®

Casing of stainless steel, in addition to better cleaning impact-resistant powder-coated. Mechanical parts anodized of aircraft aluminum and made of high quality plastic. Particularly robust and high quality extremely quiet running brushless DC motor 100VA, 24V with high torque. Number of rotation 0 to 300 U/Min, stepless variable. Soft start, with right and left rotation.

Automatic cooling water: switchable to water off, water on continuously, water on only for grinding process.

The switching power supply 230V is located outside the thin section machine, spatially separated in its own plastic case. Spacer with wear-resistant plastic-slide bar to guide and as torque support for grinding mice. Pedal switch on the front of the machine. With universal quick-change grinding discs adapter for use with high-tech diamond grinding discs.

In the scope of delivery are not included the diamond grinding discs.

Price on request

Splicer SystemAbele®

This splicer is equipped with resilient pressure elements and provides with gentle and metered pressure for a uniformly thin adhesive layer. Ideal for fixing of cover glasses! Press element down with a finger until the desired pressure is achieved. Block with clamping lever, ready. It is characterized by comfortable usability.

All parts are made of high-strength aircraft-aluminum or brass milled or turned.

The screws are stainless; the base plate is hard anodized. Resistant to 180 ° C, so in the laboratory furnace used to accelerate curing of the embedding agent / adhesive.

Size approx. 27cm x 8cm x 14cm high

Weight ca. 1,9kg

Pressing force min. 700N

Pressing force max. 8000N

Price on request

Thin Section Mouse Giessener Format SystemAbele®

Thin section mouse of solid milled and turned Aluminum- and brass parts for samples on glass slides

Giessener Format (28 x 48mm) 10 x 5 x 2.5 cm.

With integrated spring operated vacuum pump.

The thin section mouse supplied with a wear part unit.

Price on request

EG Set-up Station Giessener Format SystemAbele®

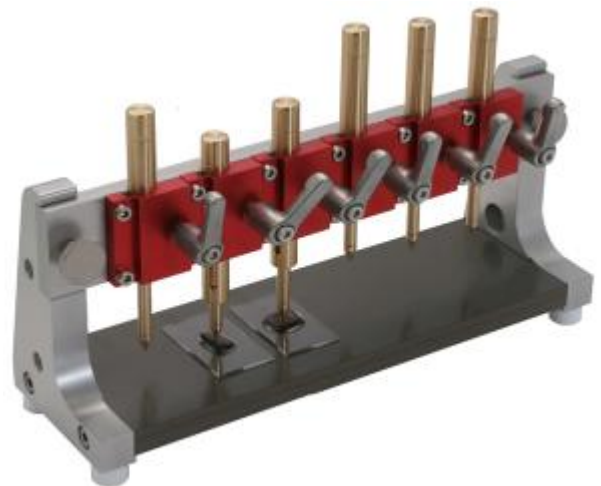
Set-up station suitable for the thin section mouse Giessener Format,

approx. 12 x 9 x 8cm on anti-slip rubber feet,

complete with a set of measure-sheets (2 sheets per thickness)

from 30µ to 1000µ.

Price on request



SD Thin Section Mouse DIN-format SystemAbele®

Thin section mouse of solid milled and turned Aluminum- and brass parts for samples on glass slides in DIN format (76 x 26mm) approx. 10 x 5 x 2.5 cm. With integrated spring operated vacuum pump.

The thin section mouse supplied with a wear part unit.

Price on request

ED Set-up Station DIN-format SystemAbele®

Set-up station suitable for the thin section mouse casting format, approx. 12 x 9 x 8cm on anti-slip rubber feet, complete with a set of measure-sheets (2 sheets per thickness)

from 30µ to 1000µ

Price on request

PG Polishing Mouse Giessener Format SystemAbele®

With this polishing mouse you drive your glass slide with Giessener Format for final polishing comfortable and safe.

Milled from solid aircraft aluminum, approx. 5.5 x 3.5 x 0,8mm.

Price on request

MP Measuring instrument for professional execution

Measuring instrument for fast as lightning and µ-accurate measurement of grinding thickness. With a waterproof robust quality dial gauge, professional quality from Black Forest in Germany.

Work much easier, indispensable for the petrographers!

Price on request

DS030 Diamond disc grain size 30µ SystemAbele®

High-tech grinding disc system Abele with nickel bound industrial diamonds on the grinding ring. Sliding surfaces in Mohs hardness degree 9 for the spacer of the **thin section mouse**.

Plastic guide in the middle, driving dog on the bottom.

Price on request

DS074 Diamond disc grain size 74µ SystemAbele®

High-tech grinding disc system Abele with nickel bound industrial diamonds on the grinding ring. Sliding surfaces in Mohs hardness degree 9 for the spacer of the **thin section mouse**.

Plastic guide in the middle, driving dog on the bottom.

Price on request

DS125 Diamond disc grain size 125µ SystemAbele®

High-tech grinding disc system Abele with nickel bound industrial diamonds on the grinding ring. Sliding surfaces in Mohs hardness degree 9 for the spacer of the **thin section mouse**.

Plastic guide in the middle, driving dog on the bottom.

Price on request

DS177 Diamond disc grain size 177µ SystemAbele®

High-tech grinding disc system Abele with nickel bound industrial diamonds on the grinding ring. Sliding surfaces in Mohs hardness degree 9 for the spacer of the **thin section mouse**.

Plastic guide in the middle, driving dog on the bottom.

Price on request

Further accessories or special designs on request!



Glass slides for thin section production

Glass slides of the dimensions of 48x28mm, also known as Giessener Format, are used traditionally for thin section preparation. Today's mainly mechanical production makes in this connection high demands on the glass slides:

- Low-stress glass to prevent breakage of glass.
- Glass thickness > 1.5 mm also to prevent breakage of glass
- Constant thickness of the glass with low tolerances ($\pm 0,05\text{mm}$) for low removal (time and cost) for plane grinding
- Ground edges (90 °) to prevent injuries and outbreaks



And of course you want to order good value for your actual needs, without specified minimum order quantities.

In cooperation with the traditional company W. Knittel Glass Processing GmbH, as a manufacturer of various standard- and special glass slides as well as many users, we have developed a product that will meet the stated requirements.

We have prepared a glass slide set to find the ideal product:

Glass slide 48x28mm, 1.5-1.6mm, package 50 pieces

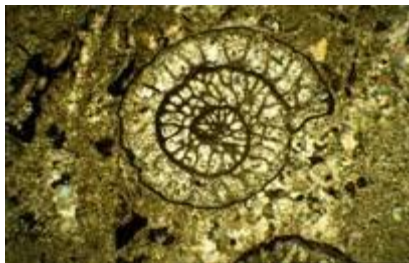
- GOT001 Cut edges, clear
- GOT002 Cut edges, one-side matted
- GOT003 Ground edges,
- GOT004 Ground edges, one-side



GOTDG001 Cover glasses 24x40mm, 0.17mm, package 100 pieces,

Naturally, you will receive quantity discounts.
You can cover your e.g. monthly or annual needs individually.

For large sections, we also offer at the right level and of course in the same quality:



75x100mm



50x50mm



Glass slide 50x50mm, 1.5-1.6mm, package 50 pieces

- GOT005 Cut edges, clear
- GOT006 Ground edges, clear
- GOTDG002 Cover glasses 50x50mm, 0.17mm, package 100 pieces,

Glass slide 75x100mm, 1.5-1.6mm, package 50 pieces

- GOT007 Cut edges, clear

Marking pen, diamond

Naturally, you will receive quantity discounts.
You can cover your e.g. monthly or annual needs individually.

Microscopic accessories

ZubSP001 **Grinding-press for flat on-luting of materialographic samples**

Zub012 **Metal glass slide for flat on-luting of materialographic samples, 76 x 26 x 2 mm, black anodized aluminum**

Zub011 **Plasticine for fixation of materialographic samples on metal glass slides 1kg**



Zub013 **Storage boxes for thin sections casting format
Space for 50 glass slides**

Zub014 **Storage boxes for thin sections casting format
Space for 100 glass slides**

Microscope - Cleaning Accessories

MRS001 **Cleaning set for microscopes and optical equipment**

Sealing lacquer

Lac001 **Protective lacquer for spraying onto ready-prepared materialographic samples**
Easy analysis by microscopy, removable with acetone
400 ml spray can

Microscopy and Digital image processing

Auflicht-Industriemikroskop mit digitaler Fotodokumentation

Ein preiswertes und leistungsstarkes Auflichtmikroskop für das industrielle Labor, kombiniert mit einer professionellen und schnellen Digitalen Fotodokumentation und Bildvermessung?

Dies ist kein Wunschvorstellung mehr. Wir haben endlich ein passendes System für diesen Anwendungsbereich.

Auflichtmikroskop (Hell- und Dunkelfeld) MEIJI MT 7530F

Digitalkamera dhs-PixelFox incl. Bildvermessung



Auflichtmikroskop MEIJI MT 7530F

- Robustes Stativ.
- 5-fach Objektivreolver
- Trinotubus 80/20 fest und Okularen 10x/22
- C-mount Adapter
- 3-Platten Kreutztisch, kein Objektführer erforderlich
- Starke 12V/50W Beleuchtung mit Feld- und Aperturblende
- Hell- und Dunkelfeld
- Polarisationszubehör.
- Hochwertige Plan EPI Objektive 5x, 10x, 20x und 50x und 100x für Hell- und Dunkelfeld.
- Staubschutzhülle

Digitalkamera dhs-PixelFox*

- Auflösung 3,0 Mega Pixel
- CCD 1/2" CMOS Sensor
- C-mount Anschluß
- USB 2.0 Schnittstelle
- Kalibrierungsmaßstab

Bildvermessung*

- Abspeichern von Bildern in jpg, bmp und png Format
- Kalibrierungsmodus
- 2D Vermessung von Bildern (Strecke, Kreise, Winkel uvm.)
- Bildbeschriftung

*zur Adaption an vorhandenen Rechner

Unser Komplettpreis: 11.450 €

Preise: Zuzüglich gesetzlicher Mehrwertsteuer

Incl. Installation und Einweisung vor Ort

Garantie 36 Monate



inklusive Schliffpresse



Digital image processing

990006	Basic module
991106	Back up/ from-bin transfer
992076	Viewer (up to 5 places)
992086	Viewer (up to 15 places)
992096	Viewer (up to 16 places)
992176	License server (up to 5 licenses)
992186	License server (for a further 5 licenses)
991006	Image for Falcon / Eagle ¹⁾
991016	Image indentation for Twain
992216	Image indentation for dhs-MicroCam 1.3 ¹⁾
992286	Image indentation for dhs-MicroCam 3.1 ¹⁾
992226	Image indentation for dhs-MicroCam 3.3 ¹⁾
992236	Image indentation for dhs-Videokonverter ¹⁾
992296	Image indentation for Zeiss-AxioCam MRc5 ¹⁾
992246	Image indentation for Nikon DXM1200F ¹⁾
992046	Image-transfer
990016	Image measurement
992166	Image measurement Light
992036	Panorama picture
992016	Sharper design
992006	Image retouching
992116	Setting series
992106	Integrator FL
992066	Surface investigation
992136	Grain sizes
992146	Particle counting
992256	Layer thicknesses
992266	Casting analysis <i>Standard</i>
992276	Casting analysis <i>Advanced</i>
992156	Crimp-analysis ²⁾
56810	Runtime license for image analysis
991116	Report generation (Base: MS Word TM)
991146	Communication
992206	Web-Server
560910	Win2PDF (PDF-Writer to article 991116)

1) This image indentions form a group, each workstation must be licensed only one of these image indentions to use all of them.

2) Runtime-license article 56810 necessary

606362	dhs-Video Converter ¹⁾
606390	Falcon
606392	Eagle
16507	JVC TK-C1481BEG
16580	dhs-MicroCam 1.3 (color)
16581	dhs-MicroCam 1.3 (s/w)
16582	dhs-MicroCam 3.1
16780	dhs-MicroCam 3.3 ²⁾
16706	Jenoptik ProgRes C14 ²⁾
16610	Zeiss-AxioCam MRc5

1) FireWire- connection cable (Art. 16346) necessary!

2) FireWire-card (Art. 16751) necessary!

If interested, please ask for detailed information or arrange a demo-appointment in your laboratory!



pixel-fox®

pixel-fox® is the smart imaging package
with a digital microscope camera
Software – for recording, measuring
and saving of images

Art. No. 99800 pixel-fox

Scope of services:

- ❖ 2D-measurements of
 - Distances
 - Circles
 - Angles
 - Areas
 - Perpendicular drop
- ❖ Scale bar in various representations
- ❖ Online measurement preview
- ❖ Digital zoom
- ❖ Spacer chroma keying
- ❖ Colour selection for dimension lines and labels
- ❖ Inserting arrows and texts
- ❖ Layer functionality
- ❖ Object micrometer for calibration

Scope of delivery:

3 Mpix digital camera (1/2") with C-Mount-thread

USB 2.0-connection to PC

Recording software for setting parameters (exposure time, brightness, contrast, white balance, color saturation, shading correction, mirrors, etc.)

Image recording and image measurement (including calibration scale)


Images as *.jpg, *.bmp and *.png storable

Centric selectable image section

For more information: www.pixel-fox.com


Preparation Examples

Preparation parameters are based on 40 mm samples in single contact pressure

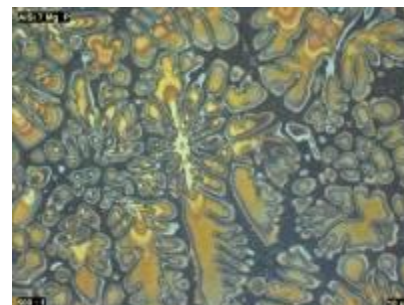
	Grinding	Fine grinding	Polish. I	Polish. II
Base	Piatto	Allegran 9	PT Silk	PT Nap
S/P - medium	Diamond	DiaDoublo	DiaDoublo	DiaDoublo
Grain size	120	9 µm	3 µm	1 µm
Lubricant	Water	---	---	---
Rotation	300	150	150	150
Pressure	30 N	30 N	25 – 30 N	20 N
Time	to plane	3 Minutes	3 Minutes	2 Minutes

For example: steel generally, heat treatable steels, tool steels, high speed steel




	Grinding	Fine grinding	Polish. I	Polish. II
Base	Aka-Rhaco	Aka Largan	PT Silk*	PT Chem
S/P - medium	SiC-Paper	Diamaxx M	Diamaxx M	OxyPol
Grain size	320	9 µm	3 µm	50 nm
Lubricant	Water	LB Blue	LB Blue	---
Rotation	300	150	150	150
Pressure	30 N	30 N	25 – 30 N	15 N
Time	to plane	3 Minutes	3 Minutes	2 Minutes

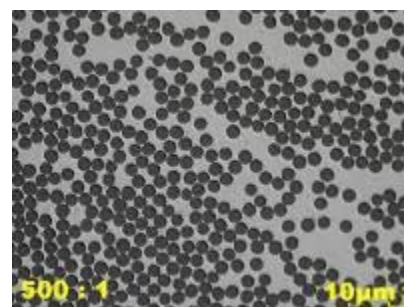
For example: gray cast iron, Al and Al-alloy, Cu and Cu-alloy, nickel-based materials



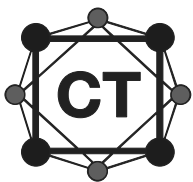
* For large sample cross-sections and without edge sharpness can also be used PT Mol

	Grinding	Fine grinding	Polish. I	Polish. II
Base	Aka-Rhaco	Aka-Rhaco	PT Seda	PT Chem
S/P - medium	SiC-Paper	SiC- Paper	DP-Susp. P	OxyPol
Grain size	320/1000	2500	3 µm	50 nm
Lubricant	Water	Water	LB Green	---
Rotation	300	150	150	150
Pressure	30 N	30 N	25 – 30 N	15 N
Time	to plane	1 Minute	3 Minutes	2 Minutes

For example: composite materials like carbon fiber, fiberglass or electronic components



Our application lab develops for you preparation parameters free of charge or provides assistance on special preparation problems. Contact us or make an appointment, either in our application laboratory or at your business site.



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