

# CONSUMABLES 2019

## Cutting | Mounting | Grinding, Polishing, Etching | Analyzing





# Science for Solids

Materialography Hardness Testing Heat Treatment Elemental Analysis Milling & Sieving Particle Analysis As part of the VERDER Group, the business division VERDER SCIENTIFIC sets standards in the development, manufacture and sales of laboratory and analytical equipment. The instruments are used in the areas of quality control, research and development for sample preparation and analysis of solids.

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- Application consultation and end-user seminars with individual focus: Our application experts ascertain parameters and instrument configurations best suited for preparation of your sample material.
- In-house software and hardware development: ATM hosts the complete R&D process in-house making customer-specific solutions and adaptations to individual requirements our great strength.



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### ATM Contact

ATM is a provider of integrated solutions. In addition to our comprehensive product range we offer full application support and technical service.

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### Exhibitions 2019

#### Germany

Control, Stuttgart 07.-10.05.2019 GiFa, Düsseldorf 25.-29.06.2019 Härtereikongress, Köln 22.-24.10.2019

#### International

ArabLab, United Arab Emirates 12.-14.03.2019



To find the complete list of dates and events, please visit our website at www.atm-m.com/news/dates-events/. ATM exhibits its products at various international trade shows and conferences and also host inhouse seminars.



# Excellent sales and service network throughout the world





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Precision replication material

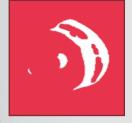
Replication set

#### Disclaimer

- We reserve the right to effect technical changes as well as price adjustments due to technical progress. All listings in our price list are based on our General Terms for Delivery and Payment.
- This price list covers only the current versions of products.
- The images may show accessories which may not be part of the standard delivery scope.
- Our warranty period is product related (see page 62).
- All prices are ex works, including packaging. ATM price list 2019/E, valid from 1st January 2019 to 31st December 2019

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# Cutting

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Item No.	Unit	Description			
	5 Units / 10 Units /	Corundum	cut-off wheels	s for precision	cut-off machines
	-5% -10%	Ø	Thickness	Arbor Size	
	Ť		d for universal als of higher ha		
92002643	5 Pcs.	100 mm	0.25 mm	12.7 mm	
92002644	5 Pcs.	125 mm	0.45 mm	12.7 mm	
92002769	5 Pcs.	150 mm	0.45 mm	12.7 mm	
			ined for univer als of lower ha	sal application dness and mou	
92002645	5 Pcs.	100 mm	0.4 mm	12.7 mm	
92002646	5 Pcs.	125 mm	0.8 mm	12.7 mm	
92002770	5 Pcs.	150 mm	0.6 mm	12.7 mm	
92002647	5 Pcs.	200 mm	0.8 mm	12.7 mm	
92004159	5 Pcs.	150 mm	1 mm	12.7 mm	
92004998	5 Pcs.	150 mm	1 mm	20 mm	(incl. reduction ring 12.7 mm*)
92004155	5 Pcs.	200 mm	1.5 mm	12.7 mm	
		* 1 reduction	ring 12.7 mm fo	r each order	
		Reduction rin	ng 12.7 mm		
01304330	1 Pcs.	20 mm			

	5 Units / 10 Units /	Diamond cut-off wheels for precision cut-off machines						
	-5% -10%	Ø	Thickness	Arbor Size				
		» for universal application						
92002397	1 Pcs.	76 mm	0.3 mm	12.7 mm				
92002401	1 Pcs.	102 mm	0.3 mm	12.7 mm				
92002405	1 Pcs.	127 mm	0.5 mm	12.7 mm				
92002409	1 Pcs.	152 mm	0.5 mm	12.7 mm				
		» for glass, ce	ramics, rocks					
92002398	1 Pcs.	76 mm	0.3 mm	12.7 mm				
92002402	1 Pcs.	102 mm	0.3 mm	12.7 mm				
92002406	1 Pcs.	127 mm	0.5 mm	12.7 mm				
92002410	1 Pcs.	152 mm	0.5 mm	12.7 mm				
		» for hard met	tals					
92002400	1 Pcs.	76 mm	0.3 mm	12.7 mm				
92002404	1 Pcs.	102 mm	0.3 mm	12.7 mm				
92002408	1 Pcs.	127 mm	0.5 mm	12.7 mm				
92002412	1 Pcs.	152 mm	0.5 mm	12.7 mm				
		» for plastic, r	ubber on reque	est				



92002443

92002444

92002445

92002446

92006419



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Item No.	Unit	Description	Description						
		Diamond o	Diamond cup grinder						
		Ø	Thickness	Height	Arbor Size	Bond			
		» for glass	fiber-reinforced	boards					
92008573	1 Pcs.	100 mm	8 mm	35 mm	12.7 mm	galvanic			
92006607	1 Pcs.	150 mm	8 mm	35 mm	12.7 mm	galvanic			

5 Units /	10 Units
-5%	-10%

1 Pcs.

1 Pcs.

1 Pcs.

1 Pcs.

1 Pcs.

1 Pcs.

10 Units /	CBN cut-off wheels for precision cut-off machines							
-10%	Ø	Thickness	Arbor Size					
	» for comp	osites and rigid n	naterials					
	76 mm	0.9 mm	12.7 mm					
	102 mm	0.5 mm	12.7 mm					
	127 mm	0.5 mm	12.7 mm					
	153 mm	0.65 mm	12.7 mm					
	178 mm	0.9 mm	12.7 mm					
	200 mm	0.5 mm	12.7 mm					
	» other dia	meters on reque	st					

#### Machine and blade compatibility

Cut-off machine	Arbor size	Ø (max.)
Brillant 200	32 mm	254 mm/10"
Brillant 220	12.7 mm	203 mm/8"
Brillant 230	32 mm	254 mm/10" 305 mm/12"
Brillant 240	32 mm	254 mm/10"
Brillant 250	32 mm	305 mm/12" 356 mm/14"
Brillant 255	32 mm	356 mm/14" 406 mm/16"
Brillant 265	32 mm	356 mm/14" 406 mm/16"
Brillant 275	32 mm	432 mm/17" 508 mm/20"
Brillant 3D	32 mm	432 mm/17" 508 mm/20"
Brillant 285	32 mm	508 mm/20" 610 mm/24"
Brillant 2000	32 mm	610 mm/24" 813 mm/32"







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ATM type o	description	
old	new	5
С	FS-E	
D	FS-D	
Н	FS-C	į.
Е, І	FS-B	
Е, І	FS-A	
F	Ti-A	
F	NF-A	
L	NF-A	2



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#### Cut-off wheel selection according to material hardness

u	Rubber	bonded		
ype	E	3	for high-speed steels, heat-treated steels, non-corrosive steels	400-700 HV
T desc	A	50-500 Н	V Universal wheel, soft and hard metals, Superalloys	

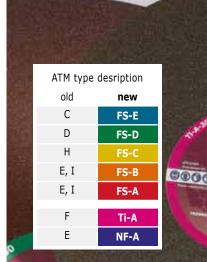
	Resi	n bonc	led									
	T	E						very	nard, ferrous i	metals >5	50 HV	
ion		D					ha	rd, ferrous	metals 40	0-700 HV		
ript	FS-	С				medium ha	rd, ferrous n	netals 30	0-550 H\	/		
desc		В			medium s	oft, ferrous m	netals 200	)-450 H	v			
Type description		Α	soft, fer	rous met	tals (30-	300 HV)						
Ĥ	Ti-	Α	ductile r	netals								
	NF-	Α	non-feri	on-ferrous metals								
			soft medium soft me				mediu	ım hard	hard		very hard	
	HV		30	50	80	120	180	250	350	500	700	940
	HRC							22	36	49	60	68

Item No.	Unit	Description							
	5 Units / 10 Units /	Premium	cut-off whee	ls for wet ab	rasive cut-off n	nachines			
	-5% -10%	Ø	Thickness	Arbor Size	Bond	Туре			
	•	NF-A - for non-ferrous metals (30-300HV)							
95012531	10 Pcs.	250 mm	1.5 mm	32 mm	SiC / Resin	NF-A, Purple			
95012538	10 Pcs.	300 mm	2.0 mm	32 mm	SiC / Resin	NF-A, Purple			
95012545	10 Pcs.	350 mm	2.5 mm	32 mm	SiC / Resin	NF-A, Purple			
95012552	10 Pcs.	400 mm	3.0 mm	32 mm	SiC / Resin	NF-A, Purple			
95012566	5 Pcs.	500 mm	4.0 mm	32 mm	SiC / Resin	NF-A, Purple			
95012573	5 Pcs.	600 mm	4.5 mm	32 mm	SiC / Resin	NF-A, Purple			
		Ti-A - for T	itanium and a	lloys, refracto	ry metals				
95012530	10 Pcs.	250 mm	1.5 mm	32 mm	SiC / Resin	Ti-A, Pink			
95012537	10 Pcs.	300 mm	2.0 mm	32 mm	SiC / Resin	Ti-A, Pink			
95012544	10 Pcs.	350 mm	2.5 mm	32 mm	SiC / Resin	Ti-A, Pink			
95012551	10 Pcs.	400 mm	3.0 mm	32 mm	SiC / Resin	Ti-A, Pink			
95012565	5 Pcs.	500 mm	4.0 mm	32 mm	SiC / Resin	Ti-A, Pink			
95012572	5 Pcs.	600 mm	4.5 mm	32 mm	SiC / Resin	Ti-A, Pink			
		FS-A - for s		300HV), non-f	errous metals, po	olymer			
95012529	10 Pcs.	250 mm	1.5 mm	32 mm	Al2O3 / Resin	FS-A, Red			
95012536	10 Pcs.	300 mm	2.0 mm	32 mm	Al2O3 / Resin	FS-A, Red			
95012543	10 Pcs.	350 mm	2.5 mm	32 mm	Al2O3 / Resin	FS-A, Red			
95012550	10 Pcs.	400 mm	3.0 mm	32 mm	Al2O3 / Resin	FS-A, Red			
95012564	5 Pcs.	500 mm	4.0 mm	32 mm	Al2O3 / Resin	FS-A, Red			
95012571	5 Pcs.	600 mm	4.5 mm	32 mm	Al2O3 / Resin	FS-A, Red			
				teel (200-450	-				
95012528	10 Pcs.	250 mm	1.5 mm	32 mm	Al2O3 / Resin	FS-B, Orange			
95012535	10 Pcs.	300 mm	2.0 mm	32 mm	Al2O3 / Resin	FS-B, Orange			
95012542	10 Pcs.	350 mm	2.5 mm	32 mm	Al2O3 / Resin	FS-B, Orange			
95012549	10 Pcs.	400 mm	3.0 mm	32 mm	Al2O3 / Resin	FS-B, Orange			
95012563	5 Pcs.	500 mm	4.0 mm	32 mm	Al2O3 / Resin	FS-B, Orange			
95012570	5 Pcs.	600 mm	4.5 mm	32 mm	Al2O3 / Resin	FS-B, Orange			





Item No.	Unit	Description				
	5 Units / 10 Units /	Premium	cut-off whee	ls for wet ab	rasive cut-off m	achines
	-5% -10%	Ø	Thickness	Arbor Size	Bond	Туре
	•	FS-C - for n	nedium hard s	steel (300-550	HV), case harden	ed, nitrided steels
95012527	10 Pcs.	250 mm	1.5 mm	32 mm	Al2O3 / Resin	FS-C, Yellow
95012534	10 Pcs.	300 mm	2.0 mm	32 mm	Al2O3 / Resin	FS-C, Yellow
95012541	10 Pcs.	350 mm	2.2 mm	32 mm	Al2O3 / Resin	FS-C, Yellow
95012548	10 Pcs.	400 mm	3.0 mm	32 mm	Al2O3 / Resin	FS-C, Yellow
95012562	5 Pcs.	500 mm	4.0 mm	32 mm	Al2O3 / Resin	FS-C, Yellow
95012569	5 Pcs.	600 mm	4.5 mm	32 mm	Al2O3 / Resin	FS-C, Yellow
		FS-D - for h	nard steels (4	00-700HV), ar	nealed, carburise	d steels
95012526	10 Pcs.	250 mm	1.5 mm	32 mm	Al2O3 / Resin	FS-D, Green
95012533	10 Pcs.	300 mm	2.0 mm	32 mm	Al2O3 / Resin	FS-D, Green
95012540	10 Pcs.	350 mm	2.5 mm	32 mm	Al2O3 / Resin	FS-D, Green
95012547	10 Pcs.	400 mm	3.0 mm	32 mm	Al2O3 / Resin	FS-D, Green
95012561	5 Pcs.	500 mm	4.0 mm	32 mm	Al2O3 / Resin	FS-D, Green
95012568	5 Pcs.	600 mm	4.5 mm	32 mm	Al2O3 / Resin	FS-D, Green
		FS-E - for v	ery hard stee	ls (>550HV)		
95012525	10 Pcs.	250 mm	1.5 mm	32 mm	Al2O3 / Resin	FS-E, Blue
95012532	10 Pcs.	300 mm	2.0 mm	32 mm	Al2O3 / Resin	FS-E, Blue
95012539	10 Pcs.	350 mm	2.5 mm	32 mm	Al2O3 / Resin	FS-E, Blue
95012546	10 Pcs.	400 mm	3.0 mm	32 mm	Al2O3 / Resin	FS-E, Blue
95012560	5 Pcs.	500 mm	4.0 mm	32 mm	Al2O3 / Resin	FS-E, Blue
95012567	5 Pcs.	600 mm	4.5 mm	32 mm	Al2O3 / Resin	FS-E, Blue



	5 Units / 10 Units /	Corundum of	cut-off whee	ls for wet a	brasive cut-off m	achines
	-5% -10%	Ø	Thickness	Arbor Size	Bond	Туре
		C -Universal	wheel for ma	terials of higl	n to very high hard	ness
92001550	10 Pcs.	235 mm	1.5 mm	32 mm	Resin	С
92001554	10 Pcs.	250 mm	1.5 mm	32 mm	Resin	С
92001558	10 Pcs.	300 mm	2 mm	32 mm	Resin	С
92001669	10 Pcs.	350 mm	2 mm	32 mm	Resin	С
92001783	10 Pcs.	400 mm	3 mm	32 mm	Resin	С
		D - Universal	wheel for me	edium hard m	aterials, case-hard	ened steels
92001551	10 Pcs.	235 mm	1.5 mm	32 mm	Resin	D
92001555	10 Pcs.	250 mm	1.5 mm	32 mm	Resin	D
92001559	10 Pcs.	300 mm	2 mm	32 mm	Resin	D
92001670	10 Pcs.	350 mm	2 mm	32 mm	Resin	D
92001784	10 Pcs.	400 mm	3 mm	32 mm	Resin	D
		E - for soft st	teels, non-feri	rous-materia	ls, plastics	
92001552	10 Pcs.	235 mm	1.5 mm	32 mm	Resin	E
92001556	10 Pcs.	250 mm	1.5 mm	32 mm	Resin	E
92001560	10 Pcs.	300 mm	2 mm	32 mm	Resin	E
92001671	10 Pcs.	350 mm	2.2 mm	32 mm	Resin	E
92001785	10 Pcs.	400 mm	3 mm	32 mm	Resin	E
		F - for titaniu	ım and titaniı	ım alloys		
92002417	10 Pcs.	230 mm	1.5 mm	32 mm	Resin	F
92002425	10 Pcs.	250 mm	1.5 mm	32 mm	Resin	F
92002426	10 Pcs.	300 mm	2 mm	32 mm	Resin	F
92002427	10 Pcs.	350 mm	2.5 mm	32 mm	Resin	F
92002428	10 Pcs.	400 mm	3 mm	32 mm	Resin	F
		I - for constr	uction steels	and cast mat	erial	
92006066	10 Pcs.	250 mm	1.6 mm	32 mm	Resin	I
92005863	10 Pcs.	300 mm	2 mm	32 mm	Resin	I
92005862	10 Pcs.	350 mm	2.5 mm	32 mm	Resin	I
92008504	10 Pcs.	400 mm	3 mm	32 mm	Resin	I







Item No.	Unit	Description				
	5 Units / 10 Units /	Corundum c	ut-off wheels f	or wet abra	sive cut	-off machines
	-5% -10%	Ø	Thickness	Arbor Size	Bond	Туре
	·	A - Universal	wheel, soft and	hard metals,	Superall	oys
92002413	10 Pcs.	229 mm	0.8 mm	32 mm	Rubber	А
92002599	10 Pcs.	254 mm	1 mm	32 mm	Rubber	А
92002441	10 Pcs.	305 mm	1 mm	32 mm	Rubber	А
92002436	10 Pcs.	356 mm	1.6 mm	32 mm	Rubber	А
92002439	10 Pcs.	406 mm	1.6 mm	32 mm	Rubber	А
92008537	10 Pcs.	500 mm	2.4 mm	32 mm	Rubber	А
92004007	10 Pcs.	600 mm	4.3 mm	40 mm	Rubber	А
		B - for high-sp	beed steels, hea	t-treated ste	els, non-o	corrosive steels
92002414	10 Pcs.	229 mm	1.6 mm	32 mm	Rubber	В
92002600	10 Pcs.	254 mm	1.6 mm	32 mm	Rubber	В
92002434	10 Pcs.	305 mm	1.6 mm	32 mm	Rubber	В
92002437	10 Pcs.	356 mm	2.4 mm	32 mm	Rubber	В
92002440	10 Pcs.	406 mm	2.4 mm	32 mm	Rubber	В
92008874	10 Pcs.	500 mm	3 mm	32 mm	Rubber	В

5 Units / 10 Units /		Diamond cut-off wheels for wet abrasive machines				
	-5% -10%	Ø	Thickness	Arbor Size	Bond	
		» for ceramic r	naterials			
92002450	1 Pcs.	230 mm	1.2 mm	32 mm	Bronze	
92002452	1 Pcs.	250 mm	1.2 mm	32 mm	Bronze	
92002453	1 Pcs.	300 mm	1.6 mm	32 mm	Bronze	
		» for hard met	als, generally f	or materials	of high hardness	
92002451	1 Pcs.	250 mm	1.2 mm	32 mm	Resin	
92002454	1 Pcs.	300 mm	1.6 mm	32 mm	Resin	
	» for composite materials (hard/soft combinations)					
92004719	1 Pcs.	300 mm	1.3 mm	32 mm	Bronze	
		other diameter	rs on request			

5 Units / 10 Units / -5% -10%	CBN cut-off v	t abrasive machines	
-5% -10%	Ø	Thickness	Arbor Size
	» for Nickel an	nd Cobald based	1 alloys
92002456 1 Pcs.	250 mm	1.6 mm	32 mm
92002457 1 Pcs.	300 mm	1.6 mm	32 mm

	5 Units / 10 Units /	Accessories for cut-off wheels
	-5% -1070	
		Dressing stone
92002460	1 Pcs.	Dressing stone for diamond cut-off wheels, CBN cut-off wheels and cup wheels



95004146

95004147



15

Item No	. Unit	Descrip	tion
	5 Units / 10 Units /		orrosion coolant
	-5%		t abrasive cut-off machines
		» for s	teel, cast iron, non-ferrous metal
9501201	2 11	concent	trate (ratio 1:35) / refractometer: 1.4%/°Bx
9501201	3 51	concent	trate (ratio 1:35) / refractometer: 1.4%/°Bx
9501201	4 10	concent	trate (ratio 1:35) / refractometer: 1.4%/°Bx



5 Units / 10 Units /	ATM-CoolCut, environment- and user-triendly				
-5% -10%	free of oil, boron, nitride and formaldehyde				
	» for steel, cast iron, light and non-ferrous metal, glass and ceramics, composites good anti-corrosion protection and cutting properties				
	good and corrosion protection and catting properties				
11	ATM-CoolCut (mixing ratio 1:25 (4%) – 1:12.5 (8%) / refractometer: 2.0%/°Bx				
51	ATM-CoolCut (mixing ratio 1:25 (4%) – 1:12.5 (8%) / refractometer: 2.0%/°Bx				
10	ATM-CoolCut (mixing ratio 1:25 (4%) – 1:12.5 (8%) / refractometer: 2.0%/°Bx				

#### Cooling agent additives

		ATM-CoolAdd NF	
92006504	1 kg	ATM-CoolAdd NF, additive for cutting of hard metals, c-steels, copper alloys (prevents dilution of cobalt or chrome) Mixing concentration in aqueous coolant approx. 0.1 - 0.3%	Size grade
		ATM-CoolAdd CU	Entscl
95008731	11	ATM-CoolAdd CU, additive for cutting of non-ferrous materials like Cu and its alloys. Mixing concentration in aqueous coolant approx. 0.05 - 0.2%	häumer
		ATM-CoolClean B	degröße 1 Lite
95006593	1 kg	ATM-CoolClean B, bactericide for cooling lubricants (prevents contamination by a wide range of bacteria) Mixing concentration in aqueous coolant approx. 0.1 - 0.2%	
		Defoaming agent	
92006503	200 ml	Defoaming agent, additive for water-based coolants Mixing concentration in aqueous coolant approx. 0.005 - 0.05%	
92006506	1	Defoaming agent, additive for water-based coolants Mixing concentration in aqueous coolant approx. 0.005 - 0.05%	
		» Download of Safety Data Sheets at http://www.atm-m.com/products/consumables	



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#### **Info Coolants**

Additional informations about the handling and maintenance of coolants are availabe in our "ATM-CoolCut" manual





Item No.	Unit	Description
		Accessories for maintenance and care of coolants
		Maintenance and testing set
95007866	1 Pcs.	Maintenance and testing set for anti-corrosion coolant (case with handheld refractometer, plastic cup for extraction of sample, test strips, thermometer)
		Accessories for maintenance and testing set
92005616	100 Pcs.	pH test strips
92005613	100 Pcs.	Nitrate test strips
92005614	100 Pcs.	Nitrite test strips
95007865	100 Pcs.	Water hardness test strips
		ATM-PreClean
92006502	1 kg	ATM-PreClean, disinfection system cleaner for cleaning the coolant circulation system before exchanging coolant

		Accessories for maintenance and care of cut-off machines
		Corrosion protection- and care spray
95001749	400 ml	Corrosion protection- and care spray, fully synthetical, silicon-free corrosion protection oil, for metal surfaces (e.g. clamping vices)
		Anti-fog spray
95008900	100 ml	Anti-fog spray (prevents steaming up the viewing window by splash water)
		» Download of Safety Data Sheets at http://www.atm-m.com/products/consumables

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Item No.	Unit	Description	
	5 Units / 10 Units /	Filter fleece for belt filter syst	ems
	-5% -10%		Length x Width
		» for belt filter system BFA 165	
92008745	1 Pcs.	Filter fleece roll, fine, 100 $\mu\text{m}$	100 m x 450 mm
		» for belt filter system BFA 325	
92008744	1 Pcs.	Filter fleece roll, coarse, 150 $\mu m$	100 m x 450 mm
		» for belt filter system BFA 285	
92008780	1 Pcs.	Filter fleece roll, coarse, 150 µm	100 m x 710 mm
		» for belt filter system BFA 100/	130
95001696	1 Pcs.	Filter fleece roll, coarse, 150 $\mu m$	100 m x 420 mm
		» other sizes on request	



1 Pcs.

1 Pcs.

s/10 Units/	Filter fleece mat	for recirculation cooling systems
-10%		Length x Width
	» for Brillant 2000	
	Filter fleece mat	940 x 720 mm
	» for Brillant 285	
	Filter fleece mat	724 x 720 mm



5 Units / 10 Units /	Filter inserts		
-5% -10%		Dimensions	
	» for Brillant 255/2	265/270/275/280	
1 Pcs.	Filter cloth and fleece	490 x 290 x 190 mm	
	» for recirculation of	ooling system 45 Ltr.	
1 Pcs.	Filter cloth and fleece	290 x 150 x 190 mm	(until year of construction 2012)
1 Pcs.	Filter cloth and fleece	250 x 200 x 155 mm	(from year of construction 2013)
	» for settling tank		
1 Pcs.	Fleece	290 x 150 x 190 mm	(until year of construction 2012)
1 Pcs.	Fleece	250 x 200 x 155 mm	(from year of construction 2013)









# Mounting

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#### **Properties of hot mounting materials**

Mounting material	Recommended Application	Basis/ Filler	Hardness (Shore D)	Removal rate (grindability)
Bakelite (black, red, green)	Routine work, soft to medium-hard materials, good for padding	Phenolic resin/ wood flour	92	medium
EPO-Max black	Gap-free embedding, edge examination, medium-hard to hard materials, easy cleaning of mould and ram due to low adhesion	Epoxy / mineral	93	very low
Duroplast black	Conductive, SEM-analysis, electrolytic polishing	Phenolic resin/ graphite	89	medium
Duroplast blue	Gap-free mounting, edge examination, soft to medium-hard materials, recommended for grinding stones	Phenolic resin/ glass fiber	92	low
Thermoplast	Transparent mounting, targeted preparation, good for padding, marking	Acrylic resin	86	medium

Item No.	Unit	Description
	5 Units / 10 Units / -5% -10%	Accessories for hot mounting
		Accessories for hot mounting
92002660	90 ml	Silicon paste, anti-stick agent
92002661	200 ml	Silicon spray, anti-stick agent
92004441	1 Pcs.	Brass brush for cleaning of hot mounting press
92002658	1 Pcs.	Funnel for hot mounting material
92002715	1 Pcs.	Square bottle with screw-top for approx. 1 ltr. mounting material
92002657	100 Pcs.	Angle adapter for angled polishing, 10°
92001716	10 Pcs.	Dosing spoon for hot and cold mounting material, 13 ml
92002662	100 Pcs.	Steel clip for for aligning thin samples in mould
92002663	100 Pcs.	Plastic clip for aligning thin samples in mould, transparent
92002707	100 Pcs.	Plastic clip for aligning thin samples in mould, black
92002708	100 Pcs.	Plastic clip for aligning thin samples in mould, red
92002709	100 Pcs.	Plastic clip for aligning thin samples in mould, grey







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Item No.	Unit	Description
	5 Units / 10 Units /	Hot mounting material
	-5% -10%	
		EPO-Max black, epoxy resin for gap-free embedding
	NEW	» very high hardness, easy cleaning of mould and ram due to low
		adhesion » with mineral filler
95013811	1 kg	EPO-Max black
95013812	5 kg	EPO-Max black
95013813	10 kg	EPO-Max black
		Epo black, epoxy resin, suppressed gap forming » very high hardness
		<ul> <li>w contains a high proportion of glass and mineral filler</li> </ul>
95011990	1 kg	Epo black
95011991	5 kg	Epo black
95011992	10 kg	Epo black
		Duroplast blue, diallylphthalate, suppressed gap forming » general purpose and especially for grinding stones » high hardness
		ontains a high proportion of glass fiber
95011999	1 kg	Duroplast blue
95012000	5 kg	Duroplast blue
95012001	10 kg	Duroplast blue
05011002	110	Duroplast black, phenolic resin for SEM examinations and electrolytic polishing > medium hardness > conductive, contains graphite particles
95011993	1 kg	Duroplast black
95011994 95011995	5 kg	Duroplast black
92011992	10 kg	Duroplast black
		Thermoplast, acrylic resin for transparent mounts » ideal for targeted preparations » low - medium hardness
95011996	1 kg	Thermoplast
95011997	5 kg	Thermoplast
5011998	10 kg	Thermoplast
		Bakelite black, phenolic resin for general purpose » medium hardness » contains wood powder » very convenient material for filling
95011981	1 kg	Bakelit black
95011982	5 kg	Bakeliet black
95011983	10 kg	Bakelite black
		Bakelite red, phenolic resin for general purpose » medium hardness » contains wood powder
95011984	1 kg	Bakelite red
95011985	5 kg	Bakelite red
95011986	10 kg	Bakelite red
		Bakelite green, phenolic resin for general purpose » medium hardness » contains wood powder
95011987	1 kg	Bakelite green
95011988	5 kg	Bakelite green
95011989	10 kg	Bakelite green





#### Properties of cold (castable) mounting materials

Mounting material	Recommended Application	Basis/ Filler	Hardness (Shore D)	Removal rate (grindability)
KEM 15 plus	Gap-free mounting, edge examination, medium-hard to hard materials	Methyl-methacrylate/ styrole	85	very low
KEM 20	Transparent mounting (pressure vessel), targeted preparation	Methyl-methacrylate	82	medium
KEM 30	Semi-transparent mounting (pressure vessel), routine work, soft to medium-hard materials	Methyl-methacrylate	85	medium
KEM 35	Minimized gap formation, edge examination, medium-hard to hard materials	Methyl-methacrylate/ ceramic	87	very low
KEM 60	Universal usage	Tetrahydrofurfuryl- 2-methacrylate / filler mineral	83	low
KEM 90	Mounting using vacuum, sensitive and brittle materials	Epoxy resin	79	high

Item No.	Unit	Description
		Infiltration set
		» for cold mounting and hardening using vacuum, recommended for Epoxy resin
Z6510000	1 Pcs.	desiccator incl. non-return valve, vacuum pump, hose and pressure gauge
		Infiltration unit
		» for cold mounting, pouring and hardening using vacuum
M6500001	1 Pcs.	infiltration unit, 230 V/50 Hz, vacuum pressure 0.8 bar, W 330 x H 270 x D 300 mm (including desiccator with mechanic dosing and vacuum pump, rotating disc for 8 silicon mounting cups Ø 50 mm or 9 PTFE-mounting cups Ø 40 mm, 10 mixing cups)
		110 V/60 Hz on request
		Pressure unit

		Pressure equipment for bubble free hardening of methylmethacrylates (e.g. for Technovit 4004, KEM 20), compressed air required
92002281	1 Pcs.	Pressure equipment, dimensions: B340 x W340 x H255 mm









Item No.	Unit	Description
		Cold mounting material methacrylate
		CT = curing time
		KEM 15 plus blue, opaque, suppressed gap formation 2-component system: powder + liquid (1.5:1 [Vol%]) » for gap-free mounting, edge examination, medium-hard to hard materials
95012019	1 Pcs.	KEM 15 plus, SET including 1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons
95011628	1 kg	KEM 15 plus, powder, blue, opaque, suppressed gap formation, CT: approx. 20 min
95011630	10 kg	KEM 15 plus, powder, blue, opaque, suppressed gap formation, CT: approx. 20 min
95011629	500 ml	KEM 15 plus, liquid
95011631	5	KEM 15 plus, liquid
		KEM 20, transparent (pressure appliance) 2-component system: powder + liquid (2:1 [Vol%]) » for transparent mounting (pressure vessel), targeted preparation
95013990	1 Pcs.	KEM 20, SET including 1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons
95013939	1 kg	KEM 20, powder, transparent, CT: approx. 12 min
95013940	5 kg	KEM 20, powder, transparent, CT: approx. 12 min
95013941	10 kg	KEM 20, powder, transparent, CT: approx. 12 min
95013942	500 ml	KEM 20, liquid
95013943	1	KEM 20, liquid
		<ul> <li>KEM 30, green, transparent</li> <li>2-component system: powder + liquid (2:1 [Vol%])</li> <li>» for semi-transparent mounting (pressure vessel), routine work, soft to medium-hard materials</li> </ul>
95012021	1 Pcs.	KEM 30, SET including 1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons
92004080	1 kg	KEM 30, powder, green, transparent, CT: approx. 5 min
92004082	5 kg	KEM 30, powder, green, transparent, CT: approx. 5 min
92004081	500 ml	KEM 30, liquid
92004083	1	KEM 30, liquid
92002540	2.5	KEM 30, liquid
		KEM 35, light green, opaque, low in gaps
		2-component system: powder + liquid (1.5:1 [Vol%]) » for minimized gap formation, edge examination, medium-hard to very hard materials
95012022	1 Pcs.	» for minimized gap formation, edge examination, medium-hard to very
95012022 92002473	1 Pcs. 1 kg	<ul> <li>» for minimized gap formation, edge examination, medium-hard to very hard materials</li> <li>KEM 35, SET including 1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing</li> </ul>
		<ul> <li>» for minimized gap formation, edge examination, medium-hard to very hard materials</li> <li>KEM 35, SET including 1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons</li> </ul>
92002473	1 kg	<ul> <li>» for minimized gap formation, edge examination, medium-hard to very hard materials</li> <li>KEM 35, SET including 1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons</li> <li>KEM 35, powder, light green, opaque, CT: approx. 12 min</li> </ul>
92002473 92002474	1 kg 5 kg	» for minimized gap formation, edge examination, medium-hard to very hard materials         KEM 35, SET including 1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons         KEM 35, powder, light green, opaque, CT: approx. 12 min         KEM 35, powder, light green, opaque, CT: approx. 12 min
92002473 92002474 92002512	1 kg 5 kg 10 kg	<ul> <li>* for minimized gap formation, edge examination, medium-hard to very hard materials</li> <li>KEM 35, SET including 1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons</li> <li>KEM 35, powder, light green, opaque, CT: approx. 12 min</li> <li>KEM 35, powder, light green, opaque, CT: approx. 12 min</li> <li>KEM 35, powder, light green, opaque, CT: approx. 12 min</li> </ul>
92002473 92002474 92002512 92002475	1 kg 5 kg 10 kg 500 ml	<ul> <li>» for minimized gap formation, edge examination, medium-hard to very hard materials</li> <li>KEM 35, SET including 1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons</li> <li>KEM 35, powder, light green, opaque, CT: approx. 12 min</li> <li>KEM 35, powder, light green, opaque, CT: approx. 12 min</li> <li>KEM 35, powder, light green, opaque, CT: approx. 12 min</li> <li>KEM 35, powder, light green, opaque, CT: approx. 12 min</li> <li>KEM 35, powder, light green, opaque, CT: approx. 12 min</li> </ul>





Item	No.	Unit		Description
				Cold mounting material MMA-free
				CT = curing time
			NEW	KEM 60, red 2-component system (MMA-free): powder + liquid (2:0,9 [weight-%]) » universal usage
95014	1004	1 Pcs.		KEM 60, SET including 1 kg powder, 500 ml fluid, 40 mixing cups, 40 mixing sticks, 2 doosing spoons
95013	3184	1 kg		KEM 60, powder, liquid, red, CT approx. 15 - 18 min.
95013	8185	5 kg		KEM 60, powder, liquid, red, CT approx. 15 - 18 min.
95013	8186	10 kg		KEM 60, powder, liquid, red, CT approx. 15 - 18 min.
95013	8187	500 ml		KEM 60, liquid

		Cold mounting material epoxy resin
		CT = curing time
		KEM 90, clear, transparent 2-components-system: resin + hardener (2:1 [weight-%]) » suitable for vacuum infiltration e.g. porous materials
92002484	500 ml	KEM 90, resin, clear, transparent, CT: approx. 16 - 24 h
92002485	250 ml	KEM 90, hardener

		Cold mounting material methylmethacrylate
		CT = curing time
		Technovit 4000 SET white, opaque 3-component system: powder + fluid 1 + fluid 2 (3:2:1 [Vol%]) » for gap-free embedding, edge examination, medium hard to hard materials
92001683	1 Pcs.	Technovit 4000 SET (750 g / 500 ml / 250 ml), white, opaque, CT: approx. 8 min
92001684	1 Pcs.	Technovit 4000 SET (1.5 kg / 1 Ltr. / 500 ml), white, opaque, CT: approx. 8 min
Alternative:	KEM 20	Technovit 4004, transparent 2-component system: powder + liquid (2:1 [Vol%]) » for transparent embedding (pressure vessell), target preparation
92001688	1 kg	Technovit 4004, powder, transparent (bubble-free in pressure appliance), CT: approx. 12 min
92001689	2 kg	Technovit 4004, powder, transparent (bubble-free in pressure appliance), CT: approx. 12 min
92001691	500 ml	Technovit 4004, liquid
92001692	1	Technovit 4004, liquid
Alternative:	KEM 30	Technovit 4071, green, transparent 2-component system: powder + liquid (2:1 [Vol%]) » for semi-transparent embedding, (pressure vessel), routine embedding,
		medium hard to hard materials
92001695	1 kg	medium hard to hard materials         Technovit 4071, powder, green, transparent, CT: approx. 4-6 min
92001695 92001696	1 kg 2 kg	medium hard to hard materials
	-	medium hard to hard materials Technovit 4071, powder, green, transparent, CT: approx. 4-6 min
92001696	2 kg	medium hard to hard materials Technovit 4071, powder, green, transparent, CT: approx. 4-6 min Technovit 4071, powder, green, transparent, CT: approx. 4-6 min
92001696 92001698	2 kg 500 ml	medium hard to hard materials Technovit 4071, powder, green, transparent, CT: approx. 4-6 min Technovit 4071, powder, green, transparent, CT: approx. 4-6 min Technovit 4071, liquid
92001696 92001698 92001699 95004058	2 kg 500 ml 1 l	medium hard to hard materials         Technovit 4071, powder, green, transparent, CT: approx. 4-6 min         Technovit 4071, powder, green, transparent, CT: approx. 4-6 min         Technovit 4071, liquid         Technovit 4071, liquid         Technovit 5000, copper-brown         2-component system: powder + fluid (1,55:1 [Vol%])         > conductive, for SEM examinations         Technovit 5000, powder, copper-brown (bubble-free with pressure vessel), CT: approx. 7 min.
92001696 92001698 92001699	2 kg 500 ml 1 l	medium hard to hard materials         Technovit 4071, powder, green, transparent, CT: approx. 4-6 min         Technovit 4071, powder, green, transparent, CT: approx. 4-6 min         Technovit 4071, liquid         Technovit 4071, liquid         Technovit 5000, copper-brown         2-component system: powder + fluid (1,55:1 [Vol%])         » conductive, for SEM examinations

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10 Units -10%

5 Units -5%

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		Accessories for cold mounting
92001715	100 Pcs.	Mixing cups, disposable, 180 ml
92004360	1 Pcs.	Silicon mixing cup, reusable
92001717	100 Pcs.	Mixing sticks (wood)
92002623	100 Pcs.	Plastic mounting aid Ø 30 mm, gap 1 mm
92002625	100 Pcs.	Plastic mounting aid Ø 30 mm, gap 2 mm
92002624	100 Pcs.	Plastic mounting aid Ø 30 mm, gap 3 mm
92002658	1 Pcs.	Funnel for hot mounting material
92002715	1 Pcs.	Square bottle with screw-top for approx. 1 ltr. mounting material
92002657	100 Pcs.	Angle adapter for angled polishing, 10°
92001716	10 Pcs.	Dosing spoon for hot and cold mounting material, 13 ml
92001779	10 Pcs.	Dosing spoon for cold mounting material, 20 ml
92001781	10 Pcs.	Dosing spoon for cold mounting material, 13 ml
92002662	100 Pcs.	Steel clip for for aligning thin samples in mould
92002663	100 Pcs.	Plastic clip for aligning thin samples in mould, transparent
92002707	100 Pcs.	Plastic clip for aligning thin samples in mould, black
92002708	100 Pcs.	Plastic clip for aligning thin samples in mould, red
92002709	100 Pcs.	Plastic clip for aligning thin samples in mould, grey



#### Cold mounting moulds

		Silicon rubber round, beveled edge reuseable, not suitable for light curing
92002511	1 Pcs.	Silicon rubber round, Ø 25 mm / H 23 mm
92002504	1 Pcs.	Silicon rubber round, Ø 30 mm / H 25 mm
92002505	1 Pcs.	Silicon rubber round, Ø 32 mm / H 25 mm
92002506	1 Pcs.	Silicon rubber round, Ø 38 mm / H 25 mm
92005567	1 Pcs.	Silicon rubber round, Ø 40 mm / H 30 mm
92005568	1 Pcs.	Silicon rubber round, Ø 50 mm / H 30 mm
		Silicon rubber square, beveled edge reuseable, not suitable for light curing
92002509	1 Pcs.	Silicon rubber square, 55 x 30 mm / H 22 mm
92002510	1 Pcs.	Silicon rubber square, 70 x 40 mm / H 22 mm
		Polypropylen round reuseable, for light curing, with exchangeable bottom
92001719	1 Pcs.	Polypropylen round, Ø 25 mm / H 27 mm
92001710	1 Pcs.	Polypropylen round, Ø 30 mm / H 27 mm
92001711	1 Pcs.	Polypropylen round, Ø 40 mm / H 27 mm
		PTFE round, beveled edge reuseable, not suitable for light curin, with exchangeable bottom
92002513	1 Pcs.	PTFE round, Ø 25 mm / H 23 mm
92002514	1 Pcs.	PTFE round, Ø 30 mm / H 25 mm
92002515	1 Pcs.	PTFE round, Ø 32 mm / H 25 mm
92002516	1 Pcs.	PTFE round, Ø 38 mm / H 25 mm
92002517	1 Pcs.	PTFE round, Ø 40 mm / H 30 mm
92002518	1 Pcs.	PTFE round, Ø 50 mm / H 30 mm
92002519	1 Pcs.	PTFE round, Ø 70 mm / H 30 mm









# Grinding, Polishing, Etching

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	Item No.	Unit	Description		
			Solution Boxes		
		NEW		es including p	preparation guide for respective materials
			Solution Box Al (	≥ <mark>99,7%), wr</mark> o	ought Al alloys
ADV/	95013971	1 Pcs.	Solution Box	Ø 200 mm	AI (≥99,7%), wrought AI alloys
	95013972	1 Pcs.	Solution Box	Ø 250 mm	Al (≥99,7%), wrought Al alloys
	95013973	1 Pcs.	Solution Box	Ø 300 mm	Al (≥99,7%), wrought Al alloys
			Aluminum alloys		
	95013900	1 Pcs.	Solution Box	Ø 200 mm	Aluminum alloys
and the second second second	95013883	1 Pcs.	Solution Box	Ø 250 mm	Aluminum alloys
CUT	95013473	1 Pcs.	Solution Box	Ø 300 mm	Aluminum alloys
			Composites (CFC,		
	95013911	1 Pcs.	Solution Box	Ø 200 mm	Composites (CFC/GFC)
	95013894	1 Pcs.	Solution Box	Ø 250 mm	Composites (CFC/GFC)
	95013877	1 Pcs.	Solution Box	Ø 300 mm	Composites (CFC/GFC)
Carlo Carlo					
			Cast iron (GJS/G	JL)	
	95013915	1 Pcs.	Solution Box	Ø 200 mm	Cast iron (GJS/GJL)
a de la	95013898	1 Pcs.	Solution Box	Ø 250 mm	Cast iron (GJS/GJL)
	95013881	1 Pcs.	Solution Box	Ø 300 mm	Cast iron (GJS/GJL)
			Soft to medium-h	ard steel	
	95013913	1 Pcs.	Solution Box	Ø 200 mm	Soft to medium-hard steel
	95013896	1 Pcs.	Solution Box	Ø 250 mm	Soft to medium-hard steel
The sea and the sea of	95013879	1 Pcs.	Solution Box	Ø 300 mm	Soft to medium-hard steel
in all			Medium-hard to h	ard steel	
	95013901	1 Pcs.	Solution Box	Ø 200 mm	Medium-hard to hard steel
And And And	95013884	1 Pcs.	Solution Box	Ø 250 mm	Medium-hard to hard steel
	95013474	1 Pcs.	Solution Box	Ø 300 mm	Medium-hard to hard steel
1.0	05012014	1 Dcc	Stainless steel	Ø 200 mm	Stainless steel
	95013914	1 Pcs.	Solution Box	Ø 200 mm	
	95013897 95013880	1 Pcs.	Solution Box	Ø 250 mm Ø 300 mm	Stainless steel
	93013880	I PCS.	Solution Dox		Stanless steel
			Steel and welded	steel (macro	
and the second sec	95013910	1 Pcs.	Solution Box	Ø 200 mm	Steel and welded steel (macro)
	95013893	1 Pcs.	Solution Box	Ø 250 mm	Steel and welded steel (macro)
and the second	95013876	1 Pcs.	Solution Box	Ø 300 mm	Steel and welded steel (macro)
			Nitrided steel		
	95013916	1 Pcs.	Solution Box	Ø 200 mm	Nitrided steel
	95013899	1 Pcs.	Solution Box	Ø 250 mm	Nitrided steel
	95013882	1 Pcs.	Solution Box	Ø 300 mm	Nitrided steel
			Ceramics		
	95013904	1 Pcs.	Solution Box	Ø 200 mm	Ceramics
	95013887	1 Pcs.	Solution Box	Ø 250 mm	Ceramics
	95013870	1 Pcs.	Solution Box	Ø 300 mm	Ceramics





Item No.	Unit	Description			
		Solution Boxes			
	NEW		les including	preparation guide for respective materials	
	NEW	Cobalt based allo	v		$\sim$
95013907	1 Pcs.	Solution Box	Ø 200 mm	Cobalt based alloy	
95013890	1 Pcs.	Solution Box	Ø 250 mm	Cobalt based alloy	
95013873	1 Pcs.	Solution Box	Ø 300 mm	Cobalt based alloy	
		Nickel based allo	N/		
95013974	1 Pcs.	Solution Box	Ø 200 mm	Nickel based alloy	
95013975	1 Pcs.	Solution Box	Ø 250 mm	Nickel based alloy	
95013976	1 Pcs.	Solution Box	Ø 300 mm	Nickel based alloy	
		Spray coatings (			
95013906	1 Pcs.	Solution Box	Ø 200 mm	Spray coatings (metallic)	rions
95013889	1 Pcs.	Solution Box	Ø 250 mm	Spray coatings (metallic)	
95013872	1 Pcs.	Solution Box	Ø 300 mm	Spray coatings (metallic)	
		Magnesium			
95013912	1 Pcs.	Solution Box	Ø 200 mm	Magnesium	
95013895	1 Pcs.	Solution Box	Ø 250 mm	Magnesium	UTY
95013878	1 Pcs.	Solution Box	Ø 300 mm	Magnesium	2
		Circuit board (no	n assembled)		
95013903	1 Pcs.	Solution Box	Ø 200 mm	Circuit board (non assembled)	A DECK
95013886	1 Pcs.	Solution Box	Ø 250 mm	Circuit board (non assembled)	
95013869	1 Pcs.	Solution Box	Ø 300 mm	Circuit board (non assembled)	
		Circuit board (as			The same same (manter)
95013908	1 Pcs.	Solution Box	Ø 200 mm	Circuit board (assembled)	
95013891	1 Pcs.	Solution Box	Ø 250 mm	Circuit board (assembled)	
95013874	1 Pcs.	Solution Box	Ø 300 mm	Circuit board (assembled)	
		Copper and copp	er alloys		
95013902	1 Pcs.	Solution Box	Ø 200 mm	Copper and copper alloys	
95013885	1 Pcs.	Solution Box	Ø 250 mm	Copper and copper alloys	
95013475	1 Pcs.	Solution Box	Ø 300 mm	Copper and copper alloys	
		Titanium (grade	1-4)		
95013909	1 Pcs.	Solution Box	Ø 200 mm	Titanium (grade 1-4)	South States of the
95013892	1 Pcs.	Solution Box	Ø 250 mm	Titanium (grade 1-4)	1111111111111
95013875	1 Pcs.	Solution Box	Ø 300 mm	Titanium (grade 1-4)	
		Titanium alloys			
95013905	1 Pcs.	Solution Box	Ø 200 mm	Titanium alloys	Station of the
95013888	1 Pcs.	Solution Box	Ø 250 mm	Titanium alloys	
95013871	1 Pcs.	Solution Box	Ø 300 mm	Titanium alloys	******





	Item No.	Unit	Description								
			Planar grindi	Planar grinding stone for Saphir 375							
			Usable Thickness	Arbor Size	Grain Size FEPA-standard	Ø	Inner Ø				
A I			SIC grinding st » for sintered copper		nd unalloyed), aluı	minum, chil	led cast iron,				
a	95002223	1 Pcs.	30 mm	40 mm	80	350 mm	90 mm				
	95000180	1 Pcs.		m grinding stone I (hardened and i 40 mm	not hardened), stai	nless steel, 350 mm	steel and 90 mm				
	95000210	1 Pcs.	30 mm	40 mm	150	350 mm	90 mm				
1	95002034	1 Pcs.	30 mm	40 mm	180	350 mm	90 mm				
a subset of the subset of	» inner diameter 120 mm on request Multi point dressing diamond » for dressing face grinding stones										
1	92008759	1 Pcs.	Multi point dress	sing diamond							

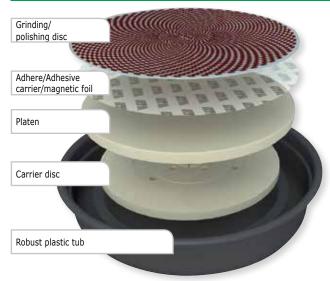
## Information about grinding stones for planar grinding / practically useable grinding layer thickness

All ATM grinding stones for planar grinding have a metal back, which enlarges the practically useable grinding layer thickness of the grinding stones.

Common grinding stones have a practically useable grinding layer thickness of 20 mm, whereas the ATM grinding stones have 32 mm (60% more!).

Range of	Range of GALAXY grinding and polishing systems									
μm		125			46			26		15
FEPA	P80-100	P100-120	P180	P240	P320	P400	P500	P600	P800	P1000
Galaxy	GREY	RED		GREEN			BLUE		YEI	LLOW

#### Carrier systems for grinding tools



The ATM GALAXY system consist of five different grinding discs, which are optimal tuned to each other. They can be used for planar -grinding, polishing, for various materials, for manual, semi-automated, and full-automated preparation.

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Item No.	Unit	Description		
	5 Units / 10 Units /	GALAXY diamond grinding	discs	
	-5% -10%	Description	ø	Fixation
			g time comp	ared to conventional grinding
		systems » for medium to hard steels » planar grinding: grey (P80 » fine grinding: green (P180 » fine grinding: yellow (P800	-320) / blue	
95005505	1 Pcs.	GALAXY Diamond Disc Grey	200 mm	Adhesion carrier/Magnet carrier
95005521	1 Pcs.	GALAXY Diamond Disc Red	200 mm	Adhesion carrier/Magnet carrier
95005522	1 Pcs.	GALAXY Diamond Disc Green	200 mm	Adhesion carrier/Magnet carrier
95005523	1 Pcs.	GALAXY Diamond Disc Blue	200 mm	Adhesion carrier/Magnet carrier
95005524	1 Pcs.	GALAXY Diamond Disc Yellow	200 mm	Adhesion carrier/Magnet carrier
95004279	1 Pcs.	GALAXY Diamond Disc Grey	250 mm	Adhesion carrier/Magnet carrier
95004310	1 Pcs.	GALAXY Diamond Disc Red	250 mm	Adhesion carrier/Magnet carrier
95004311	1 Pcs.	GALAXY Diamond Disc Green	250 mm	Adhesion carrier/Magnet carrier
95004312	1 Pcs.	GALAXY Diamond Disc Blue	250 mm	Adhesion carrier/Magnet carrier
95004313	1 Pcs.	GALAXY Diamond Disc Yellow	250 mm	Adhesion carrier/Magnet carrier
95004280	1 Pcs.	GALAXY Diamond Disc Grey	300 mm	Adhesion carrier/Magnet carrier
95004314	1 Pcs.	GALAXY Diamond Disc Red	300 mm	Adhesion carrier/Magnet carrier
95004315	1 Pcs.	GALAXY Diamond Disc Green	300 mm	Adhesion carrier/Magnet carrier
95004316	1 Pcs.	GALAXY Diamond Disc Blue	300 mm	Adhesion carrier/Magnet carrier
95004317	1 Pcs.	GALAXY Diamond Disc Yellow	300 mm	Adhesion carrier/Magnet carrier
95013917	1 Pcs.	GALAXY Diamond Disc Grey	350 mm	Adhesion carrier/Magnet carrier
95013918	1 Pcs.	GALAXY Diamond Disc Red	350 mm	Adhesion carrier/Magnet carrier
95013919	1 Pcs.	GALAXY Diamond Disc Green	350 mm	Adhesion carrier/Magnet carrier
95013920	1 Pcs.	GALAXY Diamond Disc Blue	350 mm	Adhesion carrier/Magnet carrier
95013921	1 Pcs.	GALAXY Diamond Disc Yellow	350 mm	Adhesion carrier/Magnet carrier
		» incl. Dressing stone No. 95	006603	

			GALAXY fine grinding	disc Contero	Н	
			Description		Ø	
		NEW	» pre-polishing and fine » for medium to hard m » high removal rate, hig » recommended diamor	aterials gh edge sharpno	ess, long tool life 15 μm	
95013193	1 Pcs.		GALAXY fine grinding disc	Contero H	200 mm	
95013195	1 Pcs.		$\ensuremath{GALAXY}$ fine grinding disc	Contero H	250 mm	
95013197	1 Pcs.		GALAXY fine grinding disc	Contero H	300 mm	
95013923	1 Pcs.		GALAXY fine grinding disc	Contero H	350 mm	









Item No.	Unit	Description		
	5 Units / 10 Units /	Diamond grin	ding foils, metal bond	
	-5% -10%	ø	Grain Size	
			ne d fine grinding of samples v p. rocks, glass, ceramics, sil	
92002289	1 Pcs.	200 mm	20 µm	self-adhesive
92002292	1 Pcs.	200 mm	40 µm	self-adhesive
92002293	1 Pcs.	200 mm	74 µm	self-adhesive
92002294	1 Pcs.	200 mm	125 µm	self-adhesive
92002301	1 Pcs.	250 mm	20 µm	self-adhesive
92002299	1 Pcs.	250 mm	40 µm	self-adhesive
92002298	1 Pcs.	250 mm	74 µm	self-adhesive
92002297	1 Pcs.	250 mm	125 µm	self-adhesive
92002296	1 Pcs.	250 mm	250 µm	self-adhesive
92002308	1 Pcs.	300 mm	20 µm	self-adhesive
92002306	1 Pcs.	300 mm	40 µm	self-adhesive
92002305	1 Pcs.	300 mm	74 µm	self-adhesive
92002304	1 Pcs.	300 mm	125 µm	self-adhesive
92002303	1 Pcs.	300 mm	250 µm	self-adhesive



Zirconia aluminum oxid grinding papers for coarse grinding Ø **Grain FEPA-Standard** Fixation

### very high removal rate, long lifetime » for planar grinding of larger sample cross sections, spectral analysis

92002388	25 Pcs.	300 mm	P180	self-adhesive
92002387	25 Pcs.	300 mm	P120	self-adhesive
92002386	25 Pcs.	300 mm	P60	self-adhesive
92002384	25 Pcs.	250 mm	P180	self-adhesive
92002383	25 Pcs.	250 mm	P120	self-adhesive
92002382	25 Pcs.	250 mm	P60	self-adhesive
92002376	25 Pcs.	200 mm	P180	self-adhesive
92002375	25 Pcs.	200 mm	P120	self-adhesive
92002374	25 Pcs.	200 mm	P60	self-adhesive





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#### » multiple use, tear-resistant, approved foil thickness » fixation without clamping ring 92008594 100 Pcs. 200 mm P120 Adhesion carrier/Vacuum system 92008595 100 Pcs. 200 mm P180 Adhesion carrier/Vacuum system 95007925 200 mm P240 100 Pcs. Adhesion carrier/Vacuum system 92008592 100 Pcs. 200 mm P320 Adhesion carrier/Vacuum system 92008591 100 Pcs. 200 mm P600 Adhesion carrier/Vacuum system 95000870 100 Pcs. 200 mm P800 Adhesion carrier/Vacuum system 92008596 100 Pcs. 200 mm P1200 Adhesion carrier/Vacuum system 95008558 200 mm 100 Pcs. P2500 Adhesion carrier/Vacuum system 92008557 100 Pcs. 250 mm P120 Adhesion carrier/Vacuum system 92008558 100 Pcs. 250 mm P180 Adhesion carrier/Vacuum system 95000899 250 mm P240 100 Pcs. Adhesion carrier/Vacuum system 92006305 100 Pcs. 250 mm P320 Adhesion carrier/Vacuum system 92006304 100 Pcs. 250 mm P600 Adhesion carrier/Vacuum system 95000900 100 Pcs. 250 mm P800 Adhesion carrier/Vacuum system 92008559 100 Pcs 250 mm P1200 Adhesion carrier/Vacuum system

Ø

Silicon carbide grinding foils

very plane, no rolling up

**Grain FEPA-standard** 

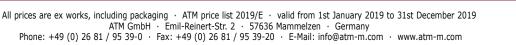
92000339	100 1 C3.	250 11111	11200	Aunesion camer/vacuum system
92008639	100 Pcs.	250 mm	P2500	Adhesion carrier/Vacuum system
92008561	100 Pcs.	300 mm	P120	Adhesion carrier/Vacuum system
92008658	100 Pcs.	300 mm	P180	Adhesion carrier/Vacuum system
95000902	100 Pcs.	300 mm	P240	Adhesion carrier/Vacuum system
92006303	100 Pcs.	300 mm	P320	Adhesion carrier/Vacuum system
92006302	100 Pcs.	300 mm	P600	Adhesion carrier/Vacuum system
95000903	100 Pcs.	300 mm	P800	Adhesion carrier/Vacuum system
92008562	100 Pcs.	300 mm	P1200	Adhesion carrier/Vacuum system
92008621	100 Pcs.	300 mm	P2500	Adhesion carrier/Vacuum system

		Adhesion carrier discs, double-sided
		Ø
		permanent adhesion on both sides, reusable » suitable for all fixing systems (standard, magnetic) » no adhesive residues
95003781	1 Pcs.	200 mm
95003607	1 Pcs.	250 mm
95003608	1 Pcs.	300 mm
		» before initial use please remove protective foil on both sides

#### Information adhesion carrier

The ATM adhere carrier is a universal adapter with nano-active surface. Consequently, a good adhesion combined with easy disassembling of the grinding and polishing discs are guaranteed. The adhesion carrier is compatible with:

GALAXY grinding and polishing discs, SiC foils, SiC paper (with foiled back), polishing cloths with carrier disc.







Item No	Unit	Description		
	5 Units / 10 Unit		inding foils	
	-5% -10%	Ø Grain	Size FEPA-standard	
		» for all app » very plane » multiple u		alysis
9500289	4 100 Pcs.	250 mm	P120	Adhesion carrier/Vacuum syster
9500289	5 100 Pcs.	250 mm	P240	Adhesion carrier/Vacuum syster
9500289	7 100 Pcs.	250 mm	P400	Adhesion carrier/Vacuum syster
9500289	8 100 Pcs.	250 mm	P600	Adhesion carrier/Vacuum system
9500290	3 100 Pcs.	250 mm	P800	Adhesion carrier/Vacuum system
9500289	9 100 Pcs.	250 mm	P1200	Adhesion carrier/Vacuum system
9500368	0 100 Pcs.	250 mm	P2500	Adhesion carrier/Vacuum system
9200867	2 100 Pcs.	300 mm	P120	Adhesion carrier/Vacuum system
9200867	3 100 Pcs.	300 mm	P240	Adhesion carrier/Vacuum system
9200867	4 100 Pcs.	300 mm	P400	Adhesion carrier/Vacuum system
9200867	5 100 Pcs.	300 mm	P600	Adhesion carrier/Vacuum system
9500325	8 100 Pcs.	300 mm	P800	Adhesion carrier/Vacuum system
9200867	6 100 Pcs.	300 mm	P1200	Adhesion carrier/Vacuum system
9500325	9 100 Pcs.	300 mm	P2500	Adhesion carrier/Vacuum syster

Especially suitable for adhere carrier disc (page 35)





Silicon carbide grinding paper, with foil backing Ø **Grain FEPA-standard** » for all adhesive systems e.g. adhesion carrier disc 95011898 100 Pcs. 200 mm P80 Adhesion carrier/Vacuum system 95011899 100 Pcs. 200 mm P120 Adhesion carrier/Vacuum system 95011900 100 Pcs. 200 mm P180 Adhesion carrier/Vacuum system 95011901 100 Pcs. 200 mm P240 Adhesion carrier/Vacuum system 200 mm 95011902 100 Pcs. P320 Adhesion carrier/Vacuum system 95011903 100 Pcs. 200 mm P400 Adhesion carrier/Vacuum system 95011904 100 Pcs. 200 mm P500 Adhesion carrier/Vacuum system 95011905 100 Pcs. 200 mm P600 Adhesion carrier/Vacuum system 95011906 100 Pcs. 200 mm P800 Adhesion carrier/Vacuum system 95011907 100 Pcs. 200 mm P1000 Adhesion carrier/Vacuum system 95011908 100 Pcs. 200 mm P1200 Adhesion carrier/Vacuum system 95011909 100 Pcs. P2500 200 mm Adhesion carrier/Vacuum system 95011928 250 mm P80 100 Pcs. Adhesion carrier/Vacuum system 95011929 P120 100 Pcs 250 mm Adhesion carrier/Vacuum system 95011930 100 Pcs. 250 mm P180 Adhesion carrier/Vacuum system 95011931 100 Pcs. 250 mm P240 Adhesion carrier/Vacuum system 95011932 100 Pcs. 250 mm P320 Adhesion carrier/Vacuum system 95011933 100 Pcs. 250 mm P400 Adhesion carrier/Vacuum system 95011934 100 Pcs. 250 mm P500 Adhesion carrier/Vacuum system 95011935 100 Pcs. 250 mm P600 Adhesion carrier/Vacuum system 95011936 100 Pcs. 250 mm P800 Adhesion carrier/Vacuum system 95011937 100 Pcs. 250 mm P1000 Adhesion carrier/Vacuum system 95011938 100 Pcs. 250 mm P1200 Adhesion carrier/Vacuum system 95011939 250 mm P2500 100 Pcs. Adhesion carrier/Vacuum system 95011943 100 Pcs. 300 mm P80 Adhesion carrier/Vacuum system 95011944 100 Pcs. 300 mm P120 Adhesion carrier/Vacuum system 95011945 100 Pcs. 300 mm P180 Adhesion carrier/Vacuum system 95011946 100 Pcs. 300 mm P240 Adhesion carrier/Vacuum system 95011947 100 Pcs. 300 mm P320 Adhesion carrier/Vacuum system 95011948 100 Pcs. 300 mm P400 Adhesion carrier/Vacuum system 95011949 100 Pcs. 300 mm P500 Adhesion carrier/Vacuum system 95011950 100 Pcs. 300 mm P600 Adhesion carrier/Vacuum system 95011951 100 Pcs. 300 mm P800 Adhesion carrier/Vacuum system 95011952 100 Pcs. 300 mm P1000 Adhesion carrier/Vacuum system 100 Pcs. 95011953 300 mm P1200 Adhesion carrier/Vacuum system 95011954 100 Pcs. 300 mm P2500 Adhesion carrier/Vacuum system

Especially suitable for adhere carrier disc (page 35)







Item No.	Unit	Descriptio	n	
	5 Units / 10 Units /	Silicon o	arbide grinding papers	
	-5% -10%		Grain FEPA-Standard	Fixation
		» for all	kinds of conventional surface	es
92002544	100 Pcs.	200 mm	P80	self-adhesive
92002545	100 Pcs.	200 mm	P120	self-adhesive
92002546	100 Pcs.	200 mm	P180	self-adhesive
92002547	100 Pcs.	200 mm	P240	self-adhesive
92002548	100 Pcs.	200 mm	P320	self-adhesive
92002549	100 Pcs.	200 mm	P400	self-adhesive
92004516	100 Pcs.	200 mm	P600	self-adhesive
92002550	100 Pcs.	200 mm	P800	self-adhesive
92002551	100 Pcs.	200 mm	P1000	self-adhesive
92002638	100 Pcs.	200 mm	P1200	self-adhesive
92002761	100 Pcs.	200 mm	P2400	self-adhesive
92004561	100 Pcs.	200 mm	P2500	self-adhesive
92002762	100 Pcs.	200 mm	P4000	self-adhesive
92001633	100 Pcs.	230 mm	P80	self-adhesive
92001634	100 Pcs.	230 mm	P120	self-adhesive
92001635	100 Pcs.	230 mm	P180	self-adhesive
92001636	100 Pcs.	230 mm	P240	self-adhesive
92001637	100 Pcs.	230 mm	P320	self-adhesive
92001638	100 Pcs.	230 mm	P400	self-adhesive
92004517	100 Pcs.	230 mm	P600	self-adhesive
92001639	100 Pcs.	230 mm	P800	self-adhesive
92001640	100 Pcs.	230 mm	P1000	self-adhesive
92001641	100 Pcs.	230 mm	P1200	self-adhesive
92002862	100 Pcs.	230 mm	P2400	self-adhesive
92004562	100 Pcs.	230 mm	P2500	self-adhesive
92002863	100 Pcs.	230 mm	P4000	self-adhesive
92001643	100 Pcs.	250 mm	P80	self-adhesive
92001644	100 Pcs.	250 mm	P120	self-adhesive
92001645	100 Pcs.	250 mm	P180	self-adhesive
92004953	100 Pcs.	250 mm	P240	self-adhesive
92001647	100 Pcs.	250 mm	P320	self-adhesive
92001648	100 Pcs.	250 mm	P400	self-adhesive
92001649	100 Pcs.	250 mm	P600	self-adhesive
92001650	100 Pcs.	250 mm	P800	self-adhesive
92001651	100 Pcs.	250 mm	P1000	self-adhesive
92001652	100 Pcs.	250 mm	P1200	self-adhesive
92002763	100 Pcs.	250 mm	P2400	self-adhesive
92004563	100 Pcs.	250 mm	P2500	self-adhesive
92002764	100 Pcs.	250 mm	P4000	self-adhesive





Item No.	Unit	Description	n	
	5 Units / 10 Units /	Silicon c	arbide grinding papers, s	elf-adhesive
	-5% -10%	Ø	Grain FEPA-Standard	Fixation
		» for all l	kinds of conventional surfac	es
92001654	100 Pcs.	300 mm	P80	self-adhesive
92001655	100 Pcs.	300 mm	P120	self-adhesive
92001657	100 Pcs.	300 mm	P180	self-adhesive
92001658	100 Pcs.	300 mm	P240	self-adhesive
92001659	100 Pcs.	300 mm	P320	self-adhesive
92001660	100 Pcs.	300 mm	P400	self-adhesive
92001661	100 Pcs.	300 mm	P600	self-adhesive
92001662	100 Pcs.	300 mm	P800	self-adhesive
92001663	100 Pcs.	300 mm	P1000	self-adhesive
92001664	100 Pcs.	300 mm	P1200	self-adhesive
92002765	100 Pcs.	300 mm	P2400	self-adhesive
92004564	100 Pcs.	300 mm	P2500	self-adhesive
92002766	100 Pcs.	300 mm	P4000	self-adhesive







		5 Units / 10 Units / -5% -10%	Ø	carbide grinding papers	Fixation
		• •	» without	ut adhesive backing	
				le with clamping ring, adhesi	
	92001810	100 Pcs.	200 mm	P60	Clamping Ring/Adhesive Foil
	92001811	100 Pcs.	200 mm	P80	Clamping Ring/Adhesive Foil
	92001812	100 Pcs.	200 mm	P120	Clamping Ring/Adhesive Foil
	92001813	100 Pcs.	200 mm	P180	Clamping Ring/Adhesive Foil
	92001814	100 Pcs.	200 mm	P240	Clamping Ring/Adhesive Foil
1000	92001815	100 Pcs.	200 mm	P320	Clamping Ring/Adhesive Foil
	92001816	100 Pcs.	200 mm	P400	Clamping Ring/Adhesive Foil
	92001817	100 Pcs.	200 mm	P500	Clamping Ring/Adhesive Foil
10000	92001818	100 Pcs.	200 mm	P600	Clamping Ring/Adhesive Foil
	92001819	100 Pcs.	200 mm	P800	Clamping Ring/Adhesive Foil
Sale 1	92001820	100 Pcs.	200 mm	P1000	Clamping Ring/Adhesive Foil
and the second second	92001821	100 Pcs.	200 mm	P1200	Clamping Ring/Adhesive Foil
	92002634	100 Pcs.	200 mm	P2400	Clamping Ring/Adhesive Foil
	92004557	100 Pcs.	200 mm	P2500	Clamping Ring/Adhesive Foil
	92002640	100 Pcs.	200 mm	P4000	Clamping Ring/Adhesive Foil
-	92001567	100 Pcs.	230 mm	P60	Clamping Ring/Adhesive Foil
2.52	92001568	100 Pcs.	230 mm	P80	Clamping Ring/Adhesive Foil
	92001569	100 Pcs.	230 mm	P120	Clamping Ring/Adhesive Foil
and the	92001570	100 Pcs.	230 mm	P180	Clamping Ring/Adhesive Foil
43.5	92001571	100 Pcs.	230 mm	P240	Clamping Ring/Adhesive Foil
	92001572	100 Pcs.	230 mm	P320	Clamping Ring/Adhesive Foil
	92001573	100 Pcs.	230 mm	P400	Clamping Ring/Adhesive Foil
Ser.	92001574	100 Pcs.	230 mm	P500	Clamping Ring/Adhesive Foil
	92001575	100 Pcs.	230 mm	P600	Clamping Ring/Adhesive Foil
1112	92001576	100 Pcs.	230 mm	P800	Clamping Ring/Adhesive Foil
	92001577	100 Pcs.	230 mm	P1000	Clamping Ring/Adhesive Foil
	92001578	100 Pcs.	230 mm	P1200	Clamping Ring/Adhesive Foil
	92002635	100 Pcs.	230 mm	P2400	Clamping Ring/Adhesive Foil
1000	92004558	100 Pcs.	230 mm	P2500	Clamping Ring/Adhesive Foil
	92001579	100 Pcs.	230 mm	P4000	Clamping Ring/Adhesive Foil

		Clamping Ring
		Ø
		» made from plastic
05610228	1 Pcs.	200 mm
05610227	1 Pcs.	230 mm
05610226	1 Pcs.	250 mm
05610225	1 Pcs.	300 mm



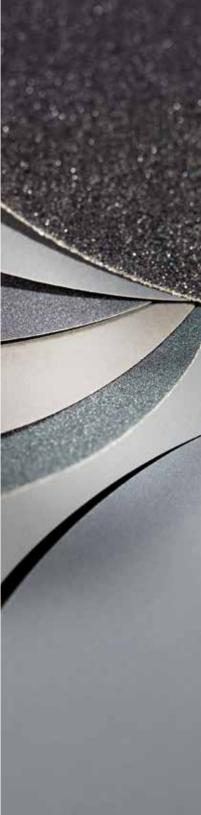


Silicon carbide grinding papers Ø **Grain FEPA-Standard** Fixation » without adhesive backing » suitable with clamping ring, adhesive foil or spray glue 92001580 100 Pcs. Clamping Ring/Adhesive Foil 250 mm P60 92001581 100 Pcs. 250 mm P80 Clamping Ring/Adhesive Foil P120 92001582 250 mm 100 Pcs. Clamping Ring/Adhesive Foil 92001583 100 Pcs. 250 mm P180 Clamping Ring/Adhesive Foil 92002369 250 mm P240 Clamping Ring/Adhesive Foil 100 Pcs. Clamping Ring/Adhesive Foil 92001585 100 Pcs. P320 250 mm 92001586 100 Pcs. 250 mm P400 Clamping Ring/Adhesive Foil 92001587 100 Pcs. 250 mm P500 Clamping Ring/Adhesive Foil 92001588 100 Pcs. 250 mm P600 Clamping Ring/Adhesive Foil 92001589 P800 Clamping Ring/Adhesive Foil 100 Pcs. 250 mm 250 mm 92001590 100 Pcs. P1000 Clamping Ring/Adhesive Foil 92001591 100 Pcs. 250 mm P1200 Clamping Ring/Adhesive Foil 92002636 100 Pcs. 250 mm P2400 Clamping Ring/Adhesive Foil 92004559 100 Pcs. 250 mm P2500 Clamping Ring/Adhesive Foil 92001592 P4000 100 Pcs. 250 mm Clamping Ring/Adhesive Foil 92001593 100 Pcs. 300 mm P60 Clamping Ring/Adhesive Foil 92001594 100 Pcs. 300 mm P80 Clamping Ring/Adhesive Foil 92001595 300 mm P120 Clamping Ring/Adhesive Foil 100 Pcs. 92001596 100 Pcs. 300 mm P180 Clamping Ring/Adhesive Foil 92001597 P240 100 Pcs. 300 mm Clamping Ring/Adhesive Foil Clamping Ring/Adhesive Foil 92001598 100 Pcs. 300 mm P320 92001599 P400 Clamping Ring/Adhesive Foil 100 Pcs. 300 mm 92001600 P500 Clamping Ring/Adhesive Foil 100 Pcs. 300 mm 92001601 100 Pcs. 300 mm P600 Clamping Ring/Adhesive Foil 92001602 P800 100 Pcs. 300 mm Clamping Ring/Adhesive Foil 92001603 100 Pcs. 300 mm P1000 Clamping Ring/Adhesive Foil 92001604 100 Pcs. 300 mm P1200 Clamping Ring/Adhesive Foil 92002637 100 Pcs. 300 mm P2400 Clamping Ring/Adhesive Foil 92004560 100 Pcs. 300 mm P2500 Clamping Ring/Adhesive Foil 92002154 P4000 100 Pcs. 300 mm Clamping Ring/Adhesive Foil



Double-sided adhesive foils

•	
	» for grinding papers
92002522 5 Pcs.	200 mm
92002524 5 Pcs.	250 mm
92002525 5 Pcs.	300 mm









Item No.	Unit	Description	
	5 Units / 10 Units / -5% -10%		pers for Saphir 300 (mobile grinder and polisher) in FEPA-Standard
		Corundum gr	rinding papers with hook-and-loop fastener backing
92004285	100 Pcs.	30 mm	P60
92004286	100 Pcs.	30 mm	P180
92004288	100 Pcs.	30 mm	P240
92004287	100 Pcs.	30 mm	P320
		Ciliaan anindi	ing any with adhesive basis
		Silicon grinal	ing papers with adhesive backing
92004498	100 Pcs.	30 mm	P400
92004499	100 Pcs.	30 mm	P600
92004631	100 Pcs.	30 mm	P1000
		» all polishin	ng cloths also available with Ø 30 mm

5 Units / 10 Units /		Silicon carbide grinding belts		
	-5% -10%		Grain FEPA-standard	
		Corundum grind	ling belts, water resistant	
92002528	5 Pcs.	100 x 920 mm	P80	
92002529	5 Pcs.	100 x 920 mm	P120	
92002530	5 Pcs.	100 x 920 mm	P180	
92002531	5 Pcs.	100 x 920 mm	P240	
92004505	5 Pcs.	100 x 920 mm	P320	
92002953	5 Pcs.	100 x 915 mm	P80	
92002954	5 Pcs.	100 x 915 mm	P120	
		Silcon carbide g	rinding belts, water-resistant	
92002664	5 Pcs.	100 x 915 mm	P80	
92002665	5 Pcs.	100 x 915 mm	P120	
92002666	5 Pcs.	100 x 915 mm	P180	
92002667	5 Pcs.	100 x 915 mm	P240	
92004613	5 Pcs.	100 x 915 mm	P320	
92002394	5 Pcs.	100 x 915 mm	P400	





Mas

ALT/VOLUNE 2500 ml 10m ROBE/GRAIN SIZE

Item No.	Unit	Description		
	5 Units / 10 Units /	Dia-COMPLETE P	oly, All-In-One Diamond suspension, water-based	
	-5% -10%	Grain Size (µm)		
		<ul> <li>water-based (ec</li> <li>closely tolerated</li> <li>high diamond co</li> </ul>		
95011833	500 ml	0.25	polycrystalline	N
95011839	11	0.25	polycrystalline	Townson and
95011845	2.5	0.25	polycrystalline	
95011834	500 ml	1	polycrystalline	
95011840	11	1	polycrystalline	
95011846	2.5 I	1	polycrystalline	
95011835	500 ml	3	polycrystalline	
95011841	11	3	polycrystalline	
95011847	2.5 I	3	polycrystalline	
95011836	500 ml	6	polycrystalline	
95011842	11	6	polycrystalline	
95011848	2.5 I	6	polycrystalline	A CONTRACTOR OF THE OWNER
95011837	500 ml	9	polycrystalline	Contract of the local division of the local
95011843	11	9	polycrystalline	
95011849	2.5 I	9	polycrystalline	
95011838	500 ml	15	polycrystalline	
95011844	11	15	polycrystalline	Dia Complete Poly Dia Complete Poly Dia Diamantsuspensien Poly on + schmierminter and Poly on + schmierminter
95011850	2.5 I	15	polycrystalline	Dia Completsuspermitter
	5 Units / 10 Units / -5% -10%	Dia-COMPLETE M	Iono, All-In-One Diamond suspension, water-based Grain Type	All-In-One suspensive bar 930
			of diamond suspension including lubricant ologically friendly)	ALT/VOLUME 2500 ml 1 µm



# Dia-COMPLETE Mono, All-In-One Diamond suspension, water-based

Combined product of diamond suspension including lubricant water-based (ecologically friendly)
 closely tolerated grain size

- » high diamond concentration
- » very high stock removal rate and repeatable results

95011815	500 ml	1	monocrystalline		
95011820	1	1	monocrystalline		
95011825	2.5	1	monocrystalline		
95011816	500 ml	3	monocrystalline		
95011821	11	3	monocrystalline		
95011826	2.5 I	3	monocrystalline		
95011817	500 ml	6	monocrystalline		
95011822	1	6	monocrystalline		
95011827	2.5 I	6	monocrystalline		
95011818	500 ml	9	monocrystalline		
95011823	11	9	monocrystalline		
95011828	2.5 I	9	monocrystalline		
95011819	500 ml	15	monocrystalline		
95011824	11	15	monocrystalline		
95011829	2.5 I	15	monocrystalline		
	» Download of Safety Data Sheets at http://www.atm-m.com/products/consumables				









nantsuspension monokristellist hd Suspension Mono Cristallist htbasis/water based

VOLUME KORNGROBE

9 µm

m

Item No.	Unit	Description	
	5 Units / 10 Units /	Diamond susper	nsion monocrystalline
	-5% -10%	Grain Size (µm)	Grain Type
		» water-based (ed » closely tolerated » high diamond co » very high stock	oncentration
92002346	250 ml	1	monocrystalline
92001725	400 ml	1	monocrystalline
92004791	1	1	monocrystalline
95002755	2.5	1	monocrystalline
92002347	250 ml	3	monocrystalline
92001727	400 ml	3	monocrystalline
92004792	1	3	monocrystalline
95002756	2.5	3	monocrystalline
92002348	250 ml	6	monocrystalline
92001728	400 ml	6	monocrystalline
92004793	1	6	monocrystalline
95002757	2.5	6	monocrystalline
92002349	250 ml	9	monocrystalline
92001733	400 ml	9	monocrystalline
92004794	1	9	monocrystalline
95002758	2.5	9	monocrystalline
92002350	250 ml	15	monocrystalline
92002589	400 ml	15	monocrystalline
92004795	1	15	monocrystalline
95002759	2.5	15	monocrystalline
			fety Data Sheets at n-m.com/products/consumables

Color code diamond suspension monocrystalline			
Grain size µm	Color		
1 µm	Blue		
<mark>3 μm</mark>	Green		
6 μm	Yellow		
<mark>9 μm</mark>	Red		
<b>15 μm</b>	Red brown		

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ATM CIMEN

10224

Item No. Unit	Description	
5 Units / 10 Units /	Diamond suspen	sion (alcohol-based) polycrystalline
-5% -10%	Grain Size (µm)	Grain Type
	alcohol-based (eco » closely tolerated » very high stock	grain size, high diamond concentration
95003494 1	1	polycrystalline
95003495 1	3	polycrystalline
95003496 1	6	polycrystalline
95003497 1	9	polycrystalline
95007978 1	15	polycrystalline



	5 Units / 10 Units / -5% -10%		Diamond susper	nsion (alconol-based) monocrystalline
			Grain Size (µm)	Grain Type
				ologically friendly) d grain size, high diamond concentration wal rate
95003490	1		1	monocrystalline
95003491	1		3	monocrystalline
95003492	1		6	monocrystalline
95003493	1		9	monocrystalline
95007977	1		15	monocrystalline

5 Units / 10 Units / -5% -10%		nsion (oil-based) polycrystalline
-5% -10%	Grain Size (µm)	Grain Type
	oil-based » closely tolerate » very high stock	d grain size, high diamond concentration removal rate
95002792 1	1	monocrystalline
95002793 1	3	monocrystalline
95002794 1	6	monocrystalline
95002795 1	9	monocrystalline
95002976 1	15	monocrystalline



Diamond suspension (oil-based) monocrystalline Grain Size (µm) Grain Type

# oil-based

» closely tolerated grain size, high diamond concentration » high stock removal rate

95002767	1	1	monocrystalline
95002768	1	3	monocrystalline
95002769	1	6	monocrystalline
95002770	1	9	monocrystalline
95002771	1	15	monocrystalline







Diamantp Diamond P Polycrista

Accusate

montposte monotristollin

Item No.	Unit	Description	
		Diamond spray p	polycrystalline
		Grain Size (µm)	Grain Type
		CFC-free » very high diamo » closely tolerated » very high stock	d grain size
95005380	150 ml	1	polycrystalline
95005381	150 ml	3	polycrystalline
95005382	150 ml	6	polycrystalline
95005383	150 ml	9	polycrystalline

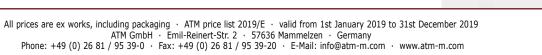
		Diamond spray r	nonocrystalline
		Grain Size (µm)	Grain Type
		<ul> <li>» CFC-free</li> <li>» very high diamon</li> <li>» closely tolerated</li> <li>» high stock removies</li> </ul>	grain size
95010491	150 ml	1	monocrystalline
95010492	150 ml	3	monocrystalline
95010493	150 ml	6	monocrystalline
95010494	150 ml	9	monocrystalline

	5 Units / 10 Units / -5% -10%	Diamond paste p Grain Size (µm)	
		Diamond paste, 10 » closely tolerated » very high diamor » very high stock r	grain size d concentration
92002340	10 g	1	polycrystalline
92002341	10 g	3	polycrystalline
92002342	10 g	6	polycrystalline
92002343	10 g	9	polycrystalline
92002344	10 g	15	polycrystalline



		5 Units / 10 Units /	Diamonu paste i	nonocrystalline	
		-5% -10%	Grain Size (µm)	Grain Type	
			Diamond paste, 10 » closely tolerated » very high diamon » high stock remon	grain size nd concentration	
	92002333	10 g	1	monocrystalline	
	92002316	10 g	3	monocrystalline	
	92002335	10 g	6	monocrystalline	
	92002336	10 g	9	monocristalline	
	92002337	10 g	15	monocristalline	
» Download of Safety Data Sheets at http://www.atm-m.com/products/consumables					

Diamond naste monocrystalline







Item No.	Unit	Description		
	5 Units / 10 Units /	Diamond lubricant		
	-5% -10%	Description	Characteristics	
		additive for diamond susp	ension/paste	
92005509	1	Diamond lubricant	- water-based -	ecologically friendly
92004925	2.5	Diamond lubricant	- water-based -	ecologically friendly
92005510	5 I	Diamond lubricant	- water-based -	ecologically friendly
95000901	1	Diamond lubricant	- alcohol-based -	for water-free preparation
95000911	2.5	Diamond lubricant	- alcohol-based -	for water-free preparation
95001194	5	Diamond lubricant	- alcohol-based -	for water-free preparation
95001759	1	Diamond lubricant	- oil-based -	for water-free preparation
95001772	2.5	Diamond lubricant	- oil-based -	for water-free preparation
95001784	51	Diamond lubricant	- oil-based -	for water-free preparation



Diamantschr Dond Lubricant Jserbasis/water Di ZAMOUNT

# **Information Diamond lubricant**

Diamond lubricant can be applied for lubrication and dilution of concentrated diamond suspensions and diamond pastes on a polishing cloth. Additionally, they act as coolant during the polishing process. When using Dia-Complete-Suspension no additional lubricant is needed.





Item No.	Unit	Description	
		Alumina suspension	, calcinated
		Description	Grain Size
		aqueous concentrate,	to dilute, 3-5 part of dest. water
92002533	11	Alumina suspension	<mark>0.3 μm</mark>
92002532	11	Alumina suspension	<mark>0.6 µm</mark>
92004950	11	Alumina suspension	<b>1 μm</b>

		Fine polishing suspensions				
		Description	Grain Size			
		» does not crystallize	ision (Al <sub>2</sub> O <sub>3</sub> , Sol-Gel suspension) Is, polymers, composites, PCB, rocks and minerals			
92002534	11	Eposal, pH≈8.0	<mark>0.06 µm</mark>			
			nixable with diluted etchant -ferrous materials, especially soft materials like joints			
92002536	11	Eposil F, pH≈9.5	0.1 μm			
92002541	11	Eposil M,pH≈9.5	<mark>0.06 µm</mark>			
		Colloidal silica » for titanium, nickel	<mark>, zinc and its alloys</mark>			
95001206	11	Eposil M11, pH≈11	0.06 μm			
		Water-free fine polish » e.g. for magnesium				
95005033	11	Etosil E, pH≈7.0	0.06 µm			
		» Download of Safety http://www.atm-n	/ Data Sheets at n.com/products/consumables			

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	Item No.	Unit	Description		
		5 Units / 10 Units /	GALAXY I	Polis <u>hing cl</u>	oth with metal back for diamond polishing
LAXY		-5% -10%	Descriptio	-	Fixation
ALPHA - Onder No. 85001407 - Onder No. 95001408 - Onder No. 95001408		·	very hard, » long life	perforated o time and sto mics, hard m polishing	ertuch, magnetisch chemotextile cloth ock removal netal, steel, cast iron, aluminum, plastic
	95001407	5 Pcs.	Alpha	200 mm	magnetic/adhesive carrier
	95001408	5 Pcs.	Alpha	250 mm	magnetic/adhesive carrier
	95001409	5 Pcs.	Alpha	300 mm	magnetic/adhesive carrier
			hard synth » material » steel, ca » for pre-	l with high h ist, iron, har	ardness d metal, ceramics
	95001410	5 Pcs.	Beta	200 mm	magnetic/adhesive carrier
	95001411	5 Pcs.	Beta	250 mm	magnetic/adhesive carrier
	95001412	5 Pcs.	Beta	300 mm	magnetic/adhesive carrier
	05012720		medium ha » ferrous » for pre- » diamono	and final po d 9/6/3/1 µ	extile cloth rous metals, minerals, ceramics, composites lishing m, oxide polishing
and the second	95012739	5 Pcs.	Phi	200 mm	magnetic/adhesive carrier
	95012740 95012741	5 Pcs.	Phi Phi	250 mm	magnetic/adhesive carrier magnetic/adhesive carrier
A CARLEY HINGS	55012741	5163.		<b>300 mm</b>	
			medium h » C-steels » for pre-		
	95001413	5 Pcs.	Delta	200 mm	magnetic/adhesive carrier
	95001414	5 Pcs.	Delta	250 mm	magnetic/adhesive carrier
	95001415	5 Pcs.	Delta	300 mm	magnetic/adhesive carrier
			soft wool ( » for all m » for inter	aterials	h SIGMA I final polishing
	95001416	5 Pcs.	Sigma	200 mm	magnetic/adhesive carrier
	95001417	5 Pcs.	Sigma	250 mm	magnetic/adhesive carrier
	95001418	5 Pcs.	Sigma	300 mm	magnetic/adhesive carrier
1		able for adhere ca			magnetic/adnesive carrier







Item No.	Unit	Description		
	5 Units / 10 Units /	GALAXY P	olishing cl	oth with metal back for diamond polishing
	-5% -10%	Description	Ø	Fixation
		» for all ma	ed, soft syn Iterials, esp nediate and	h IOTA athetic cloth pecially hard steels I final polishing
95001419	5 Pcs.	Iota	200 mm	magnetic/adhesive carrier
95001420	5 Pcs.	Iota	250 mm	magnetic/adhesive carrier
95001421	5 Pcs.	Iota	300 mm	magnetic/adhesive carrier
		GALAXY Pol short-nappo » for all ma » for final p » Alumina a » diamond	ed, soft syn Iterials Solishing & oxide sus	thetic cloth
95005776	5 Pcs.	Zeta	200 mm	magnetic/adhesive carrier
95005777	5 Pcs.	Zeta	250 mm	magnetic/adhesive carrier
95005778	5 Pcs.	Zeta	300 mm	magnetic/adhesive carrier
		GALAXY Pol soft synthe » for all ma » for final p » oxide sus	tic cloth (cl iterials polishing	h OMEGA hemically resistant)
95005779	5 Pcs.	Omega	200 mm	magnetic
95005780	5 Pcs.	Omega	250 mm	magnetic
95005781	5 Pcs.	Omega	300 mm	magnetic
		GALAXY Pol short-nappe » for all ma » no suctio » for final p » oxide sus	ed, structur iterials n of large s polishing	red synthetic cloth
95005782	5 Pcs.	Lambda	200 mm	magnetic/adhesive carrier
95005783	5 Pcs.	Lambda	250 mm	magnetic/adhesive carrier
95005784	5 Pcs.	Lambda	300 mm	magnetic/adhesive carrier

Especially suitable for adhere carrier disc (page 33)



Ready-to-use as polishing cloths are glued onto the metal (stainless steel) carrier. The rigid back ensures optimal edge retention and enhanced reproducibility of the preparation results and prolongs the life time.

The lugs support easy handling when putting the Galaxy discs on or off the magnetic adhesive carrier.









5 Units/ 10 Units/ Polishing cloths, self-adhesive							
-10% Description Ø Fixation							
ALPHA – Poliertuch, selbstklebend » very hard, perforated chemotextile cloth » long lifetime and stock removal » for ceramics, hard metal, steel, cast iron, alumin » for pre-polishing » diamond 15/9 µm	num, plastic						
92002555 5 Pcs. Alpha 200 mm self-adhesive							
92002564 5 Pcs. Alpha 250 mm self-adhesive							
92002573 5 Pcs. Alpha 300 mm self-adhesive							
Polishing cloth BETA hard synthetic cloth » for material with high hardness » for steel, cast, iron, hard metal, ceramics » for pre- polishing » diamond 15/9/6 μm							
95006571 5 Pcs. Beta 200 mm self-adhesive							
95006572 5 Pcs. Beta 250 mm self-adhesive							
95006573 5 Pcs. Beta 300 mm self-adhesive							
Polishing cloth PHI medium hard chemotextile cloth » ferrous and non- ferrous metals, minerals, cera » for pre- and final polishing » diamond 9/6/3/1 μm, oxide polishing	mics, composites						
92005678 5 Pcs. Phi 200 mm self-adhesive							
92005679 5 Pcs. Phi 250 mm self-adhesive							
92005680 5 Pcs. Phi 300 mm self-adhesive							
Polishing cloth GAMMA medium hard silk cloth » for c-steels, non-ferrous metals, coatings, plast » for pre- and intermediate polishing » diamond 9/6/3 μm	ics (GRP, CFC)						
92002558 5 Pcs. Gamma 200 mm self-adhesive							
92002567 5 Pcs. Gamma 250 mm self-adhesive							
92002576 5 Pcs. Gamma 300 mm self-adhesive							
Polishing cloth SIGMA soft wool cloth » for all materials » for pre- and intermediate polishing » diamond 9/6/3 μm							
920088105 Pcs.Sigma200 mmself-adhesive							
920088115 Pcs.Sigma250 mmself-adhesive							
920088125 Pcs.Sigma300 mmself-adhesive							
Polishing cloth DELTA medium hard silk cloth » for C-steels, precious metals, coatings, plastics, » for pre- and intermediate polishing » diamond 9/6/3 μm	medium hard silk cloth » for C-steels, precious metals, coatings, plastics, aluminum » for pre- and intermediate polishing						
92008801 5 Pcs. Delta 200 mm self-adhesive							
92008802 5 Pcs. Delta 250 mm self-adhesive							
92008803 5 Pcs. Delta 300 mm self-adhesive							

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Item No.	Unit	Description			
	5 Units / 10 Units /	Polishing cloths, self-adhesive			
	-5% -10%	Description	Ø	Fixation	
			terials and ve olishing	short-nap, medium hard synthetic cloth ry hard materials	
92004411	5 Pcs.	Epsilon	200 mm	self-adhesive	
92004412	5 Pcs.	Epsilon	250 mm	self-adhesive	
92004413	5 Pcs.	Epsilon	300 mm	self-adhesive	
		» for all ma	oft synthetic terials, espec rediate and fir	ally hard steels	
95002393	5 Pcs.	Iota	200 mm	self-adhesive	
<mark>95002394</mark>	5 Pcs.	Iota	250 mm	self-adhesive	
95002395	5 Pcs.	Iota	300 mm	self-adhesive	
		» for all ma » for final p	oft synthetic terials olishing na & oxide su		
92005681	5 Pcs.	Zeta	200 mm	self-adhesive	
92005683	5 Pcs.	Zeta	250 mm	self-adhesive	
92005684	5 Pcs.	Zeta	300 mm	self-adhesive	
		Polishing clo soft felt clot » for final p » for Alumin	:h	)	
92002563	5 Pcs.	Карра	200 mm	self-adhesive	
92002572	5 Pcs.	Карра	250 mm	self-adhesive	
92002581	5 Pcs.	Карра	300 mm	self-adhesive	
		Polishing cle soft synthet » for all ma » for final p » for oxide	ic cloth (cher terials olishing	nical resistant)	
92002562	5 Pcs.	Omega	200 mm	self-adhesive	
92002571	5 Pcs.	Omega	250 mm	self-adhesive	
92002580	5 Pcs.	Omega	300 mm	self-adhesive	
		short-nap, s » for all ma	n of large sam olishing		
95003597	5 Pcs.	Lambda	200 mm	self-adhesive	
95003598	5 Pcs.	Lambda	250 mm	self-adhesive	
95003599	5 Pcs.	Lambda	300 mm	self-adhesive	





Item No.	Unit	Description
		Polishing cloth carrier discs
		Ø
		» for adhere discs
05610121	1 Pcs.	200 mm
05610123	1 Pcs.	250 mm
05610124	1 Pcs.	300 mm
		» for magnetic system
05610206	1 Pcs.	200 mm
05610208	1 Pcs.	250 mm
05610209	1 Pcs.	300 mm
		» other diameter on request
		Carrier Plate
		Ø
		» for grinding and polishing robot SAPHIR X-Change
95005867	1 Pcs.	250 mm
		Magnetic foil, self-adhesive
		Ø
		» to apply on working wheel
92008528	1 Pcs.	200 mm
92005820	1 Pcs.	250 mm
92005822	1 Pcs.	300 mm
		» other diameter on request

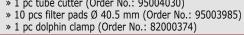






Item No.	Unit	Description
		Electrolytes (consisting of two components; total volume 1 litre)
		Description
		Electrolyte for stainless steel, aluminum, aluminum alloys and special materials » for electrolytic etching/polishing – Kristall 620
92002680	1 Pcs.	K1 - Part A, equals 1 litre in combination with Part B
92002980	1 Pcs.	K1 - Part B (perchloric acid), equals 1 litre in combination with Part A
		Electrolyte for copper and copper alloys (brass)
92003007	1 Pcs.	C1 - Part A, equals 1 litre in combination with Part B
92003008	1 Pcs.	C1 - Part B (nitric acid), equals 1 litre in combination with Part A
		Electrolyte for titanium
92003011	1 Pcs.	T1 - Part A, equals 1 litre in combination with Part B
92003012	1 Pcs.	T1 - Part B (perchloric acid), equals 1 litre in combination with Part A
		Electrolyte for grey iron
92003014	1 Pcs.	F1 - Part A, equals 1 litre in combination with Part B
92003015	1 Pcs.	F1 - Part B (perchloric acid), equals 1 litre in combination with Part A
		<ul> <li>» shipping of hazardous materials will be charged extra</li> <li>» Download of Safety Data Sheets at http://www.atm-m.com/products/ consumables</li> </ul>

		Accessories for Kristall 650	
		Description	
		Electrolyte-bottle with screw top	
95003955	1 Pcs.	Volume 1 litre	
		Accessories set for Kristall 650 in suitcase	
Z6201001	1 Pcs.	Suitcase (single-order No.): » 5 pcs V-ring (Order No.: 95003606) » 1 pc profile ring material, appr. 150 mm (Order No.: 06201052) » 1 pc flexible end piece for profile ring (Order No.: 06201051) » 1 pc tube cutter (Order No.: 95004030)	









Item No.	Unit	Description
		Etchants
		Description
95006393	1	Barker reagent (for Aluminum grain boundaries)
92002601	11	Heyn Etchant (for steel, phoshorous segregations, macro etching, copper alloys, brass)
92002602	1	Adler Etchant (for steel, weldings, macro etching)
92002603	1	Alcoholic picric acid, 5% Picral (for steel, martensite)
92002597	1	Alcoholic nitric acid, 3% Nital (for unalloyed and low alloyed steels)
92002596	1	Alcoholic nitric acid, 1% Nital (for unalloyed and low alloyed steels)
92002605	11	V2A Etchant (for austenitic steels), application with approx. 60°
92002606	250 ml	Additive for V2A-etchant
92002678	1	Sodium hydroxide solution (for aluminum alloys)
92004240	1	Oberhoffer Etchant (for steel, segregations, flow-lines, macro/micro etching)
92004492	1	Kroll Etchant (for aluminum alloys, titanium)
92004493	1	Fry Etchant (for steel, macro/micro etching, flow lines)
92004222	1	Ferronitrate 10% aqueous (copper, copper alloys)
92002750	1	Sodium picrate (for cementite detection in steel)
95002313	1	Kalling 1 Etchant (for martensitic stainless steel)
95002347	1 I	Kalling 2 Etchant (for nickel, nickel alloys, stainless steels, nickel-copper alloys)
95002434	1	Color etching according to Klemm I (for low carbon steels), stock solution
95002390	20 g	Potassium bislufite for Klemm I
95002435	1	Color etching according to Klemm II (copper, solder joints), stock solution
95002391	50 g	Potassium bislufite for Klemm II
95002436	1	Bechet-Beaujard Etchant, prior austenite grain boundaries
95002408	1	Murakami Etchant (for hard metals, molybdenum/molybdenum alloys, chromium alloys, tungsten and tungsten alloys)
Atzmit		<ul> <li>» shipping of hazardous materials will be charged extra</li> <li>» Download of Safety Data Sheets at http://www.atm-m.com/products/consumables</li> </ul>

hemikal









# Notes









# Analyzing

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# Accessories Microscopy/Analysis

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\*





			Accessories for microse	сору
			Description	
			Supporting accessories	
-	92004109	1 kg	Plasticine	
1 17	92002943	5 Pcs.	Microscope slides, metal, 76	x26 mm
- 11	92004243	100 Pcs.	Microscope slides, glas, 32x	24 mm
	92004256	100 Pcs.	Microscope slides, glas, 40x	24 mm
	M1321000	1 Pcs.	Specimen press » for parallel fixation of spec » comfortable operation with » compact, robust and dural » made of aluminum with an	timen on microscope slide n minimal effort ple nodised surface
A A A A A A A A A A A A A A A A A A A			Iron-carbon-diagram	
Para Para			Description	
			Iron-carbon-diagram	
10	92008881	1 Pcs.	Standard format	700 x 700 mm
A	92008881	1 Pcs.	Heavy format	700 x 700 mm
2.20 State 1 1	92000002	1 FCS.		700 X 700 IIIII
	Info hardnes	s test bloc	cks	
	Further information	on to our hard	ness test blocks on our website www	v.atm-m.com
10				
LO				

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Item No.	Unit	Description
	Cleaning agents for ultrasonic cleaner	
		Description
		Cleaning concentrate, alkaline » for universal use and intensive cleaning » use 1 – 5%, pH 10 at 2%, removes oils, fats, silicon oil residues, pigments, ink and proteins
92002614	11	Tickopur R 33

Cleaning concentrate with ammonia, mildly alkaline, phosphate free » use 5 – 10%, removes oils, fats, waxes, pigments, silicon fats and grime (not suitable for aluminum)

92002615	1	Tickopur RW 77	
·			

		Cleaning aids	
		Description	
95004662	1	Ethanol, 99% denatured	
95004663	5 I	Ethanol, 99% denatured	
95004664	10 I	Ethanol, 99% denatured	
92004510	1	Aceton, chemically pure	

		Assembly cleaner
		Description
		» for sample preparation, for replication set, in spray can
92004376	500 ml	Assembly cleaner spray
		<ul> <li>additional fees can be necessary by shipping of hazardous materials</li> <li>Download of Safety Data Sheets at http://www.atm-m.com/products/consumables</li> </ul>





	Item No.	Unit	Description
			Accessories
			Description
	92002779	1 Pcs.	Mounting adhesive 100 g, excellent bonding for metals and ceramics
	92002630	200 g	Cotton wool
	92008773	100 Pcs.	Specimen cleaning wipes
	92004428	300 ml	Sample protection laquer, spray (conservation of samples)
	92002629	1 Pcs.	Etching bowl, DURAN $\circledast$ glass with cover, heat-resistant, Ø 60/H 40 mm
	92002628	1 Pcs.	Etching bowl, DURAN $\circledast$ glass with cover, heat-resistant, Ø 80/H 50 mm
	92002430	1 Pcs.	Etching bowl, DURAN $\circledast$ glass with cover, heat-resistant, Ø 100/H 60 mm
	92002626	1 Pcs.	Etching bowl, DURAN $\circledast$ glass with cover, heat-resistant, Ø 150/H 80 mm
	95012078	1 Pcs.	Etching bowl, polyethylene (PE), Ø 90 /H 40 mm
	95012079	1 Pcs.	Etching bowl, polyethylene (PE), Ø 110/H 55 mm
5	95012080	1 Pcs.	Etching bowl, polyethylene (PE), Ø 110/H 75 mm
and the second se	95012081	1 Pcs.	Etching bowl, polypropylene (PP), Ø 60/H 60 mm
	95012082	1 Pcs.	Etching bowl, polypropylene (PP), Ø 115/H 70 mm
and the second second	92008770	1 Pcs.	Spray bottle, 250 ml
the second se	92002432	1 Pcs.	Spray bottle, 500 ml
	92004491	1 Pcs.	Washing bottle with narrow neck, 500 ml
	92004302	1 Pcs.	Measuring cylinder, 50 ml
	92004303	1 Pcs.	Measuring cylinder, 100 ml
3	92002431	1 Pcs.	Crucible Tong, stainless
	95008097	1 Pcs.	Crucible Tong, stainless with insulated handle
	92004265	1 Pcs.	Specimen dryer, wall fastening model, with proximity sensor
	A5810355	1 Pcs.	Specimen drying unit for set up on table
			Desiccator cabinet (95012025) Storage of samples Description Storage systems for readily prepared samples
	92002898	1 Pcs.	Disc cabinet 320 x 320 mm, for discs Ø 300 mm
14 3	92002090	1 FCS.	with 6 drawers

92002717	1 Pcs.	Disc cabinet, 290 x 290 mm, for discs Ø 200 and 250 mm with 5 drawers
95012025	1 Pcs.	Desiccator cabinet 310 x 525 x 375mm
95012026	1 Pcs.	Shelf for desiccator cabinet
92002684	1 Pcs.	Desiccator, DM 250, with cover and basket, DURAN® clear glass
95002659	1 Pcs.	Desiccator, DM 150, with cover and basket, DURAN® clear glass
92002868	1 kg	KC-drying pearls, for use with desiccator
A7500417	1 Pcs.	Sample box, 320 x 320 x 58 mm for 56 Samples Ø 25-32 mm
A7500418	1 Pcs.	Sample box, 320 x 320 x 58 mm for 25 Samples Ø 38-50 mm

with 6 drawers

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	Item No.	Unit	Description
		Safety equipment for etching	
			Description
			Face protection shield according to DIN EN 166 1 3 - S complete protection of face, unlimited field of view, acids and bases » resistant, robust plastic material, shatterproof, scratch-resistant
	95002951	1 Pcs.	Face protection shield
			Protective laboratory apron » made of PVC, with neck and side bonds, clean edges, without fabrics
	95004848	1 Pcs.	Protective Laboratory Apron, 900 x 1100 x 0.5 mm
			Nitrile gloves (single use), conforms to EN 420, EN 374
	95008893	100 Pcs.	Nitrile gloves, conforms to EN 420, EN 374, size M
	95007658	100 Pcs.	Nitrile gloves, conforms to EN 420, EN 374, size L
	95008208	90 Pcs.	Nitrile gloves, conforms to EN 420, EN 374, size XL
			Safety goggles conforms to EN 166, length-adjustable
	92005963	1 Pcs.	Safety goggles conforms to EN 166

		Pane cleaning for fume cupboard
		Description
		Pane cleaning set in suitcase
Z7510002	1 Pcs.	» Pane wiper magnet » 2x 30 pcs. cleaning cloths
95006797	1 Pcs.	Pane wiper magnet
95006798	30 Pcs.	Cleaning cloths for glass

		Replication set
		Description
		Replica system for non-destructive analyzing of microstructures quick cured 2 components compound for applying to surfaces; the cured replica can be removed easily and analysed directly
92006498	2x50 ml	2-components-compound
92006609	1 Pcs.	Dosing gun
92008692	48 Pcs.	Mixing tube

		Precision replication material	
		Description	
		Replica system for surface structures (metallic or mineral), for surface roughness inspection (R, Ra)	
95001664	900 ml	2-components-compound standard	
95001665	900 ml	2-components-compound soft	



# ATM GmbH, Germany, General Terms and Conditions of Business and Delivery

### 1. General remarks

- Deliveries and services are performed exclusively on the basis of the following General Terms and Conditions of Delivery. They form a component of all contracts entered into and also apply to all 1.1 future business relationships, even if they are not expressly agreed again.
- The Customer acknowledges these General Terms and Conditions when it places an order, and no later than upon acceptance of the delivery or service. 1.2
- Any contrary terms and conditions or divergent counter-confirmations from the Customer will 1.3 have no binding effect on us, even if we do not expressly object to them. They require our express written acknowledgement to take legal effect.
- Any addenda, amendments or ancillary agreements require our written confirmation to take legal effect. The same applies to the revocation of the written form requirement. 1.4

### 2. Offer and conclusion of contract

- Catalogues, promotional brochures, price lists, cost estimates and offers are subject to confirmation and non-binding. All documents in this respect, such as drawings, typical analyses, 2.1 dimensional data etc. are to be treated as approximate unless expressly designated as binding. We reserve our right of ownership and copyright to catalogues, drawings, cost estimates and other documents; and they may not be made available to third parties.
- 2.2 The Customer is liable for the correctness and completeness of specified dimensions and Customer samples as well as the correctness of documents to be provided by it, which include drawings, instructions, samples and the like as well as other information that affects the suitability of the items ordered for the intended application. The Customer is further liable for any infringement of third-party patent rights or intellectual property rights arising from the use of these documents. In that respect the Customer will indemnify us against any liability claims brought by third parties. We are not obliged to check whether the execution of any documents provided to us in this capacity infringes any third-party rights.
- Material samples or Customer samples are to be delivered to us by the Customer free of charge. 2.3 We may destroy any material samples submitted unless an express request for their return is made at the time of their delivery or within four weeks of us receiving them. The party submitting the material samples is liable for all risks associated with their transportation, storage and processing. This applies in particular to any damage that the material sample causes itself or in combination with any substances with which it comes into contact (toxic, corrosive, explosive materials), unless liability under clause 10.1 applies. We will invoice the analysis of material samples on the basis of the effective applicable hourly rates. If the analysis leads to a sale, the analysis costs will be offset against the purchase price.
- The contract will only come into force when we provide written confirmation of the order and in 2.4 accordance with the content of this confirmation, or upon acceptance of the delivery by the Customer. If no written confirmation is made, our delivery notes or invoices will additionally serve as order confirmations.
- We reserve the right to make technical modifications to the subject matter of the contract during the delivery period, including after issue of the order confirmation, provided this is reasonable for the Customer balanced against our interests in the modification. The same applies to standard 2.5 industry variations in weights and measures.
- Spoken promises by and arrangements with our employees shall only bind us to the extent that 2.6 these have been confirmed by us.

### 3. Deliveries

- The delivery times set out in the order confirmations are non-binding, approximate information. 3.1 They are only binding if we have expressly designated them as binding.
- The delivery period commences with the date of the written order confirmation; if, at this time, 3.2 there are any outstanding issues requiring clarification, the delivery period only commences after all such issues have been clarified. If advance payments have been agreed, the delivery period does not start until receipt of the first payment
- The delivery period will be deemed to have been complied with if the item to be delivered has left our plant or readiness for dispatch has been communicated before or on the date of expiry of the 3.3 agreed delivery period
- In justified exceptional cases, and in particular for operational reasons, part deliveries and part services may be performed subject to advance notice. These will be invoiced separately. 3.4
- We will not be liable for any delays to deliveries and services due to force majeure or other events over which we have no influence and for which evidence that they affect the completion or delivery of the subject matter of the delivery can be adduced – these include strike, lock-out, official directives, material shortages, non-availability or non-deliverability of goods etc. including such circumstances affecting our own suppliers, even where binding periods and dates have been agreed and also during any period of default. We will notify the Customer of the commencement and termination of such hindrances without undue delay. In the event of temporary impairments, we are entitled to postpone the deliveries or services for the duration of the hindrance plus a reasonable lead time. Should performance become permanently impossible, we have the right to withdraw from unfulfilled part of the contract in full or part. The Customer may demand a declaration from us as to whether we intend to withdraw from the contract or deliver within a reasonable period. If we do not provide such a declaration and the Customer feels that it is unreasonable to expect it to accept delivery due to the delay, the Customer may withdraw from the contract.
- The Customer bears sole responsibility for the suitability of the installation location for the supplied goods, for procurement of all necessary permits and for compliance with all planning, building and company regulations as well as for the preparation of the installation location, including the erection of any necessary foundations and the performance of all preliminary work necessary for the delivery and assembly or installation of the goods. The Customer also bears sole responsibility for the availability of the installation location with the necessary lifting and installation tools.
- Our performance is subject to correct and timely delivery to us by our suppliers at all times. This reservation regarding correct and timely delivery by our suppliers is subject to the proviso that we entered into a corresponding covering transaction in good time and/or we are not responsible 37 for the delayed delivery by our suppliers.
- If we are responsible for not meeting agreed binding deadlines or dates, or we are in default of delivery/service, the Customer is entitled to withdraw from the contract after the expiry of an 3.8 appropriate grace period; any further obligation to pay compensation is governed under clause 10 of these General Terms and Conditions.
- 3.9 If the Customer is in default in acceptance, we are entitled to demand compensation for nonperformance in the amount of 15% of the agreed order value, without prejudice to the option to prove a greater loss. This is subject to an appropriate grace period being set along with a notice of potential rejection and subsequent withdrawal from the contract. For its part, the Customer reserves the right to provide evidence that no loss was sustained, or that the loss was substantially lower. In the case of Customer-specific products and/or systems, the loss is in principle the contract value less any advance payments made. The option to provide evidence of a higher or lower loss is reserved.

### 4. Shipping and transfer of risk

- The place of performance for delivery is the location of our respective dispatching plant (INCO terms as amended from time to time: FCA dispatching plant). Shipping is always performed at the Customer's own risk, including where partial shipments are made or we are rendering other services such as payment of shipping costs or carriage. 4.1
- 4.2
- 4.3 In the absence of any specific instructions, packaging and the selection of the transport route and means of transport is at our discretion. If the goods are accepted by the rail company, postal service, freight carrier or other transport company with no objections, this serves as a

confirmation that the packaging is in a flawless condition on dispatch and excludes any liability on our part for any damage or loss incurred en route due to improper packaging or loading, unless we are subject to strict liability for intentional misconduct or gross negligence. The risk of accidental destruction or accidental deterioration of the goods passes to the Customer

- 4.4 no later than at the point of handover of the goods to the haulier, the railways or other freight carrier, and no later than on dispatch from our warehouse or, in the case of direct delivery, on dispatch from our dispatching plant – e.g. also for CPT and CIP transactions. If the goods are to be collected by the Customer, the risk passes to the Customer on issue of the notification informing the Customer that the goods are ready for collection.
- Any goods accepted prior to dispatch are deemed delivered pursuant to the agreed terms.
- If dispatch or acceptance is delayed at the Customer's request or for reasons for which it is at 4.6 fault, the risk of accidental destruction or accidental deterioration passes to the Customer on the date when we communicate the first and initial notification of readiness for dispatch or notification of acceptance in writing or verbally. In this case we are entitled to charge storage costs of 1.0% of the invoice amount for each month of the delivery delay, starting one month after notification of readiness for dispatch. The Customer reserves the right to furnish proof that no costs were sustained, or that the costs were substantially lower.
- In the event of a delay in acceptance by the Customer, we may assert our right under clause 3.9 or freely dispose of the item or items for delivery and supply an equivalent item or items at the 4.7 contract terms instead
- 4.8 We are entitled to insure the transport risk and invoice these costs to the Customer unless the Customer instructs otherwise in writing.

### 5. Prices and payment terms

- Prices are quoted on a strictly net basis ex works or ex warehouse, including the costs of packaging, but net of insurance, export/import or other supplementary costs and exclusive of VAT 5.1 at the applicable rate.
- 5.2 If the conclusion of the contract and the date of delivery are more than four months apart, we may invoice the prices applicable on the date of delivery, unless otherwise agreed. If this is more than a minimal price increase, the Customer may withdraw from the contract.
- Increase of wages, procurement prices, freight costs, taxes, charges or other costs that result in price increases between the conclusion of the contract and delivery, or the emergence of 5.3 equivalent new, unforeseen costs, entitle us to adjust the purchase price accordingly to the extent permissible by law.
- After conclusion of the contract we are entitled to request a deposit of a reasonable amount. In the case of Customer-specific systems/apparatus, this will be at least 50% of the contract value. 5.4
- In the absence of any other express agreement, payment will fail due on receipt of the invoice. Payments are to be made strictly net no later than 30 days after the invoice date. For Customer-specific systems/apparatus at least 50% of the order value will fail due with the request for a 5.5 deposit. The rest will be invoiced on issue of the notification of readiness for delivery and is pavable immediately.
- In the case of default we are entitled to charge interest at the level of interest for commercial 5.6 In the case of each of the control of the second se substantially lower. We reserve the right to assert further claims for damages resulting from delayed payment.
- All of our receivables are payable immediately including where bills of exchange or cheques have 5.7 been presented, if the terms of payment are breached without justification or we become aware of a substantial deterioration in the Customer's asset position after the contract is concluded. We are entitled to perform any deliveries and services outstanding at that point only against advance payment(s) or security deposit(s) or to reduce or cancel any assured commercial loans. If no advance payment(s) or security deposit(s) have been made on expiry of a reasonable grace period, we are entitled to withdraw fully or partly from the contract. In such a case we expressly reserve the right to assert claims for any expenditure incurred unnecessarily, loss of profits and other losses.
- 5.8 The Customer is only entitled to assert a right of set-off or retention, including in claims for defects or counterclaims, if the counterclaims are undisputed or established at law.

### Commissioning Customer-specific systems/apparatus 6.

- Compliance with the agreed service features is always inspected at the place of manufacture. 6.1
- If our services include assembly and commissioning, the Customer is required to prepare all installations, facilities and/or other factors necessary for the assembly of the system and its 6.2 proper commissioning in full and in good time unless these preparatory tasks are included in our scope of services under an express written agreement. In this respect the duties set out at clause 3.6 also apply.
- The provision at 6.2 notwithstanding, the Customer will be liable for the following during 6.3 assembly and commissioning:
  - a) that our employees can commence their work as soon after their arrival as possible and can perform their tasks expeditiously during regular working hours and, if we deem such to be necessary, also outside regular working hours;
  - all statutory stipulations and safety regulations are complied with and the necessary facilities for the performance of the installation work are available; b)
  - the access routes to the installation location are suitable for deliveries to be performed;
  - d) the planned location for the assembly and operation of the system is suitable;
  - the necessary lockable storage facilities for material, tools and other accessories are available e) and accessible:
  - other auxiliary personnel, additional standard tools, industrial auxiliary materials (e.g. fuel, oils and lubricants, cleaning and other incidentals, gas, water, electricity, compressed air, f) heating, light etc.) and the Customer's standard measuring and test equipment are available promptly and at no charge;
  - the goods and products delivered by us for the assembly are at the correct location at the g) beginning of and during the assembly work.
- 6.4 The Customer bears sole liability for the risk of a breach of the duties set out at clause 6.3.

### 7. Retention of title

- We reserve title to all goods supplied by us until the Customer has settled all claims arising under 7.1 the business relationship, including any future claims from contracts entered into at the same time or subsequently, from any current account balance as well as until the absolute release from any contingent liabilities entered into in the Customer's interest.
- The Customer must handle and store any goods subject to the retention of title with care and perform any standard inspection, servicing and maintenance work required at its own expense. 7.2 The Customer may neither pledge the goods subject to the retention of title nor transfer them by way of security during the period of retention of title. Any access to the goods subject to the retention of title by third parties, for example by way of pledging or confiscation, as well as any damage or destruction must be reported to us in writing without undue delay.
- If the Customer acts in a manner that is in breach of contract, in particular in the case of delayed payment of securitised claims, we are entitled to repossess the goods subject to the retention of 7.3 writing. Following repossession only represents a withdrawal from the contract if we confirm this in writing. Following repossession we are entitled to sell the goods and the proceeds will be set off against the Customer's liabilities after deduction of reasonable sales expenses.
- The Customer is entitled and authorised to sell the goods subject to the retention of title in 7.4 the course of ordinary business, which does not include what is known as the cheque-bill-of-exchange procedure. If the Customer is in default in respect of payments arising under the

business relationship with us, we may forbid that the goods be sold on. If the Customer allows its purchaser delayed payment of the purchase price, it may only sell the goods on if it, too, retains title to the goods sold.

- b) The Customer hereby assigns to us the purchase price claims or other claims for consideration accruing to it against its purchaser under the selling-on of the goods or other selling business including all ancillary rights. These serve as security to the same extent as the goods subject to the retention of title. The Customer is only entitled and authorised to sell on or otherwise dispose over the goods subject to the retention of title if it has been established that the claims arising thereunder are transferred to us, and in particular that no prohibition on assignment exists between the Customer and its purchaser.
- c) If the Customer sells the goods subject to the retention of title along with other goods not supplied by us, the assignment of the claim from the sale only applies to the level of the invoice value of the respective goods subject to the retention of title sold. Where goods in which we have a co-ownership share are sold, the claim will be assigned to the value of this co-ownership share. If the assigned claim is included in a current account, the Customer hereby assigns to us a proportion of the balance corresponding to this claim including a corresponding share of the closing balance from the current account. If an interim balance is drawn up and it is agreed for this to be carried forward, the claim accruing to us per se under the foregoing provision is to be treated as if assigned to us for the purposes of the next balance.
- d) The Customer is authorised to collect the claims assigned to us until we revoke such authorisation. We may not exercise this right of revocation as long as the Customer fulfils its payment obligations under the business relationship with us and provided we do not become aware of any circumstances which might substantially reduce the Customer's creditworthiness. If the prerequisites for exercising the right of revocation apply, we may request that the Customer assign to us any claims for surrender vis-à-vis its purchaser or notify us of the assigned claims and their debtors, provide all information necessary for collecting these claims, hand to us the associated paperwork and notify the debtors of the assignment. Additionally, we are authorised to give notice of the assignment to the debtors.
- 7.5 The Customer is entitled to process the goods subject to the retention of title in the ordinary course of its business, provided it is not in default of payment. Where the goods subject to the retention of title are processed or remodelled, we will be deemed the manufacturer of the newly created goods subject to the retention of title as set out at clause 7.1. Where the Customer processes the goods subject to the retention of title as set out at clause 7.1. Where the Guotsomer processes the goods subject to the retention of title as set out at clause 7.1. Where the Customer processes the goods subject to the retention of title in combination with other items not belonging to us, we acquire co-ownership in the new item in the proportion of the value of the goods subject to the retention of title are mixed, blended or combined with other items, and as a consequence our ownership of the goods subject to the retention of title as extinguished, the Customer hereby transfers to us the rights of ownership of the goods subject to the retention of title to the total values of the other mixed, blended or combined items; the time at which the event occurs is authoritative. The Customer will also store the items co-owned by us under the foregoing provisions at no cost to us. The co-ownership shares arising under this clause are subject to the provisions of the whole of clause 7. in the context of goods subject to the retention of title.
- 7.6 At our request the Customer is obliged to provide information on the whereabouts of the goods subject to the retention of title at any time and on any claims arising from the selling-on of the goods or other further disposal.
- 7.7 Should the value of the existing security assigned to us exceed the secured claims by a total of more than 10%, we are obliged, if requested by the Customer, to release securities of our choosing to the same level.
- 7.8 If the retention of title set out in the foregoing provisions is not legally valid under the law of the country in which the goods subject to the retention of title are located, such security as most closely resembles this and is allowed under the law of this country will be deemed agreed. If the Customer is required to act in this context, the Customer is required to perform such acts at our request.

## 8. Warranty

- 8.1 The Customer must inspect the delivered goods upon receipt, and no later than within ten working days, for defects and, if agreed, to examine any guaranteed characteristics and report any identified defects without undue delay, and no later than within a further five working days. Where goods are delivered, the goods must be inspected immediately on receipt in respect of transport and packaging damage as well as variations in terms of quantity and dimensions. Any variations must be noted on the bill of lading or delivery note. Concealed defects must be reported in writing as soon as they are discovered. If the Customer fails to report defects within the stipulated time, the goods will be deemed defect-free and contractually compliant. In terms of quality, only our description of services in the order confirmation or the manufacturer's product description is deemed agreed. Public statements, testimonials or advertisements do not count as contractually binding information about the quality of the goods. Any deviations from an instruction manual, specification or other functionality described in the contract will only be recognised as a defect if they result in a substantial impairment of use. We must be notified of any returns in advance. The rectification of defects caused by normal wear and tear, other influences or operator error are excluded from the warranty unless covered by binding statutory claims. The same applies to any defects arising that are attributable to a modification of the Guods not performed by us. We provide no warranty that the products supplied correspond to the Customer's specific application scenarios, or work together with other of the Customer's goods, or other manufacturers' goods, without failure or impairment. We accept no liability for advisory obligations. Consequently, any liability for assisted calculations, recommendations, suggested solutions etc. which are dependent on the Customer's systems or relate thereto is excluded.
- 8.2 The Customer has a right to subsequent performance for defective products by way of rectification of the defect or delivery of a defect-free replacement item at our discretion. If subsequent performance is unsuccessful, the Customer may choose to demand either a reduction in the consideration or the rescission of the contract. In the event of a minor contractual breach, in particular minor defects, the Customer will have no right of rescission. If the Customer exercises its right to rescission following unsuccessful subsequent performance, it has no additional claim to compensation due to the defect. If the Customer will retain the goods if it is reasonable for it to do so. The claim for compensation is limited to the difference between the purchase price and the value of the defective goods. This does not apply if we breached the contract in bad faith. We may choose whether to render the subsequent performance at the place of installation, the Customer must provide our representative with unrestricted access to the purchased item both as regards time and place of access. Clause 6.3 applies in this respect. The Customer may further demand that warranty work is only performed during the regular business hours for the respective location. If the customer ray any additional costs.
  8.3 In the event of third party products, our liability is limited to the assignment of the warranty
- 8.3 In the event of third party products, our liability is limited to the assignment of the warranty claims against our own supplier accruing to us. The warranty period is limited accordingly to the term that we are granted by our own supplier.
  8.4 Warranty claims will expire within 24 months from the transfer of risk or the acceptance of the
- 8.4 Warranty claims will expire within 24 months from the transfer of risk or the acceptance of the service. The warranty period relates to goods deployed in a laboratory that operates a single shift. If multiple shifts are worked, this period will be reduced accordingly to a minimum of twelve months. For repairs and spare parts the warranty period is limited to twelve months.
- 8.5 The foregoing paragraphs contain the full extent of the warranty for our products and goods. Any

further liability is governed solely by the provisions in clause 10. of these General Terms and Conditions.

8.6 The Customer is liable for the proper disposal of the supplied goods after the cessation of use in accordance with statutory provisions and at its own expense. The Customer will relieve the supplier of the statutory duties to take back old appliances and associated third party claims. If the Customer passes the supplied goods on to commercial third parties, it must impose on that party a contractual duty to properly dispose of the goods after the cessation of use in accordance with the statutory provisions and at that party's expense and to impose a corresponding obligation on any further parties to which the goods pass. If the Customer fails to do so when passing goods to a third party, it is obliged to take back the goods at its expense after the cessation of use and to properly dispose of them in accordance with the statutory provisions. The manufacturer's claim for the Customer to take on the goods and relieve it from its obligations will not expire until two years after the Customer ultimately ceases to use the appliance. The two-year period during which expiry is postponed begins no earlier than upon written notification by the Customer to the manufacturer regarding the cessation of use.

# 9. Software

- 9.1 The warranty for software is based on the above provisions in clause 8 with the following modifications: We will provide a warranty for the compliance of the software provided to the purchaser with our program specifications provided the software was installed on the systems envisaged by us in accordance with our stipulations. The warranty only covers software defects that can be readily reproduced. We undertake to rectify all non-insubstantial defects affecting usage in accordance with the contract; however, we reserve the right to select the method of rectification (installation of an improved software version or instructions on working around the defect).
- 9.2 The Customer is granted a non-exclusive and non-transferrable usage right over programs and associated documentation that are required for proper and internal use of the delivered product. The purchaser will accrue no further rights to programs and documentation, and in particular we will remain the copyright holder. The Customer is not permitted to provide third parties with access to programs, documentation and any subsequent amendments, or to copy, otherwise reproduce, decompile, disassemble or reverse-engineer such without our prior written consent.

# 10. Liability

- 10.1 We accept liability for any losses attributable to wilful misconduct or gross negligence on the part of our statutory representatives or vicarious agents or where contractually assured warranties or qualities of the goods that are intended to safeguard the Customer against atypical risks of loss are missing. In the case of ordinary negligence, we will only accept liability if material contractual duties are breached or if insurance cover is in place, and this will be limited to loss that was foreseeable at the time when the contract was entered into. No liability will be accepted for any further consequential losses. In particular, liability for any direct or indirect loss of any kind other than that set out here, including consequential loss, loss of use, income or profits and futile expenditure, additional expenditure and third-party claims is expressly ruled out, including in cases of negligence.
- 10.2 Liability is excluded in the case of defects caused by external factors such voltage fluctuations, improper installation, wear and tear, operation and use/ maintenance/ changes to the goods by the Customer or third parties commissioned by the Customer, irrespective of the legal grounds.
- In the absence of agreements to the contrary, any fixed compensation claims will be limited to a maximum of 5% of the purchase price.
- 10.4 The above limitations of liability have no bearing on any claims brought by the Customer under product liability legislation. Furthermore, the limitations on liability do not apply to personal injury, damage to health or death of the Customer or its vicarious agents and other third parties attributable to us.

# 11. Intellectual property rights and copyright

- 11.1 The products, all specifications, drawings, descriptions and illustrations are protected by intellectual property rights by the seller and subject to an obligation of confidentiality, unless they have been or will be published by the seller. The buyer will not disclose this information to anyone, except for the purpose of using the products in the course of its business.
- 11.2 The sale of the products does not bestow on the purchaser any rights or licences under any patent, industrial design or copyright, except for non-exclusive use of the product in the course of its own business.
- 11.3 If a third party brings a justified claim against the Customer due to the breach of an intellectual property right or copyright (hereinafter referred to as Protective Rights) due to the goods supplied by us or the contractually compliant use thereof, we will only be liable to the Customer subject to the following conditions:
  - We will choose, at our expense, either to obtain a usage right for the goods, to modify the
    goods such that the Protective Right is not infringed or replace the goods. If this is not
    possible at reasonable terms, we will take the goods back and refund the purchase price.
  - The obligations set out above shall only apply if the Customer notifies us of any claims brought by third parties in writing and without undue delay, does not acknowledge a breach of the Protective Rights to the third party and reserves all defensive measures and settlement negotiations for us. Should the Customer cease to utilise the product owing to loss mitigation or other significant reasons, the Customer will point out to the third party that the cessation of utilisation is no acknowledgement of any infringement of any Protective Rights.
- 11.4 If the use of the product causes a breach of a patent, industrial design or copyright and if this breach is based on designs, specifications or instructions made by the purchaser, on the operation of the system by the purchaser in which the products are included, or manufacturing processes applied thereto, the purchaser will defend the claim, which must be notified to it without undue delay, at its own expense or to settle the claim by mutual agreement and to reimburse all losses and costs incurred by the seller as a result of such breach. This also applies if the infringement of the Protective Right is caused by an unforeseeable application on the part of the buyer or due to the products being modified or deployed with products not supplied by us. Any further claims against us will not be acknowledged. This does not apply e.g. where mandatory liability exists due to product liability, wilful misconduct, gross negligence or the infringement of material contractual obligations. The Customer also retains the right to withdraw from the contract under the foregoing provisions.

# 12. Closing provisions

- 12.1 The place of jurisdiction for deliveries and payments (including actions on cheques and bills of exchange) as well as all disputes arising between the parties is the competent court for Altenkirchen, Germany. However, we reserve the right to bring a claim against the Customer at any other place of jurisdiction permitted by law. The relationship between the contracting parties is governed solely by the law applicable in the Federal Republic of Germany. The UN Convention on Contracts for the International Sale of Goods (CISG) does not apply.
- 12.2 The Customer may only transfer the rights and obligations arising under this contract to third parties with our written consent. Such consent is not required if the assignment is made in the course of an effective extended retention of title that the Customer has agreed with a third party under the provisions of clause 7.
- 12.3 If individual provisions of these terms and conditions or parts thereof become invalid, this will have no bearing on the validity of the remaining provisions. An invalid provision of these terms and conditions will be replaced by a valid provision that most closely corresponds to the commercial intent of the invalid provision.

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# Notes



# Expiry date of consumables

	Product	Expiry date
		Year(s)
Cutting	Abrasive cut-off wheels	2
	CBN cut-off wheels	2
	Diamond blades	2
	Cup grinder	2
	Coolant	2
	Additives for coolants	2
	Filter fleece & filter bags	2
Hot Mounting	Bakelite	2
	EPO-Max	2
	EPO black	2
	Duroplast	2
	Thermoplast	2
Cold Mounting	Methacrylate z.B. KEM 15+, 20, 30, 35, 60	2
-	Epoxy resin KEM 90	1
	Mounting moulds	2
	Releasing agent	2
Grinding/Polishing	Grinding wheels	2
	GALAXY Diamond grinding discs	2
	SiC grinding foils	1
	SiC grinding paper without self-adhesive back/with foil back	2
	SiC grinding paper self-adhesiUnits	1
	SiC grinding belts	1
	Adhesive foil double-side	1
	Adhesive carrier	2
	Diamond suspensions	2
	Diamond paste	2
	Diamond spray	2
	Aluminum oxide suspensions (Alumina, Eposal)	2
	Colloidal silica	2
	Polishing cloths	2
	Polishing cloth carrier discs	2
	Magnetic foil	2
Etching	Etchants & electrolytes	1
Miscellaneous	Ethanol & Aceton	2
	Ultrasonic cleaning agents (Tickopur)	2
	Replication material Provil Novo	1

# Remarks

"The listed expiry dates represent the minimum shelf life of the ATM consumables. Within this period the complete functionality of the products are guaranteed.

Reaching the expiry date does not cause a loose of the functionality of the products. Consequently, they can be used further more.

To ensure full functionality of the products, an **adequate storage** is essential. The products need to be reliably protected against humidity and temperature fluctuation.

When outside temperatures are high, delivery of the liquids of KEM 15, 20, 30, 35 and 60 is restricted. For further information please consult the data sheet.

The consumables and their packaging should not be opened unless for imminent use e.g. cut-off wheels are hygroscopic and cold mounting materials might react with oxygen).

This might influence the functionality over time.

# The expiry date starts from shipping date.

Complaints are checked by our quality management and application team.

Our general terms and conditions remain unaffected from these notes."



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