QATM®

MATERIALOGRAPHY & HARDNESS TESTING

Qprep

CUTTING | MOUNTING | GRINDING | POLISHING | ETCHING | ANALYZING | HARDNESS TESTING

CONSUMABLES

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WE ENABLE PROGRESS FOR THE BENEFIT OF MANY

VERDER SCIENTIFIC is composed of leading laboratory equipment companies active in sample preparation and analysis for quality control as well as research & development purposes. As trusted solution partner, VERDER SCIENTIFIC enables thousands of companies to ensure economic, technological and environmental progress by mastering their scientific applications. Together, we make the world a healthier, safer and more sustainable place.

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QATM – Materialography & Hardness Testing

Customized solutions – with competence and passion

Machines and equipment for the materialographic laboratory
Whatever you need for quality testing and material analysis, QATM has it all. As a manufacturer of high-quality machines for materialography (metallography) and hardness testing, we offer the most comprehensive solutions for your needs. We not only supply a wide range of instruments but also accessories, consumables, complete laboratories and tailor-made special-purpose solutions.

We aim for the highest quality
Our innovative cut-off machines, mounting presses, grinders, polishers/electrolytic etchers, hardness testers and analysis systems provide maximum reliability and flexibility. The R&D departments for hardware and software work in close cooperation with our customers to ensure continuous optimization of our products. QATM is certified according to EN ISO 9001:2015 to make sure our internal procedures for conception, development, purchasing, sales and service are efficient and reflect our high standards.

Customers all over the world appreciate QATM's extensive sales and service network as well as the direct communication with our experts. The comprehensive expertise and creativity of our qualified staff are the basis for the consistent high quality of our solutions.

QATM offers:

- **MODERN PRODUCTION ENGINEERING**
  Optimum control of every single component of our machines guarantees reliable QATM "made in Germany" and "made in Austria" product quality.

- **APPLICATION CONSULTATION AND END-USER SEMINARS WITH INDIVIDUAL FOCUS**
  Our application experts ascertain parameters and equipment configurations best suited for your sample preparation process.

- **IN-HOUSE HARDWARE AND SOFTWARE DEVELOPMENT**
  QATM hosts the complete R&D process in-house. Tailor-made solutions to meet individual requirements are our strength.

- **CONSUMABLES FOR ALL STEPS OF THE MATERIALOGRAPHIC SAMPLE PREPARATION**
  We offer a wide range of high-quality consumables for materialographic sample preparation and analysis. The consumables are tested in detail and chosen for optimal operation of QATM equipment by our application specialists at our central inhouse laboratory.

MAMMELZEN / GERMANY
- Materialography, consumables, manufacture of lab furniture
- Development, manufacturing, assembly
- Training center

GOLLING / AUSTRIA
- Hardness testing, Analysis
- Development and assembly
- Training center

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THE BEST CHOICE FOR YOUR APPLICATION

Qprep

With QPREP, QATM offers a wide range of high-quality consumables for metallographic sample preparation and analysis. All consumables are thoroughly tested and selected for perfect interaction with QATM machines.

QATM CONTACT

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

PREMIUM QUALITY
MADE IN GERMANY

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WWW.QATM.COM/CONSUMABLES

Our consumables website offers you a complete overview of our QPREP products, including detailed descriptions, specific benefits and recommended applications.

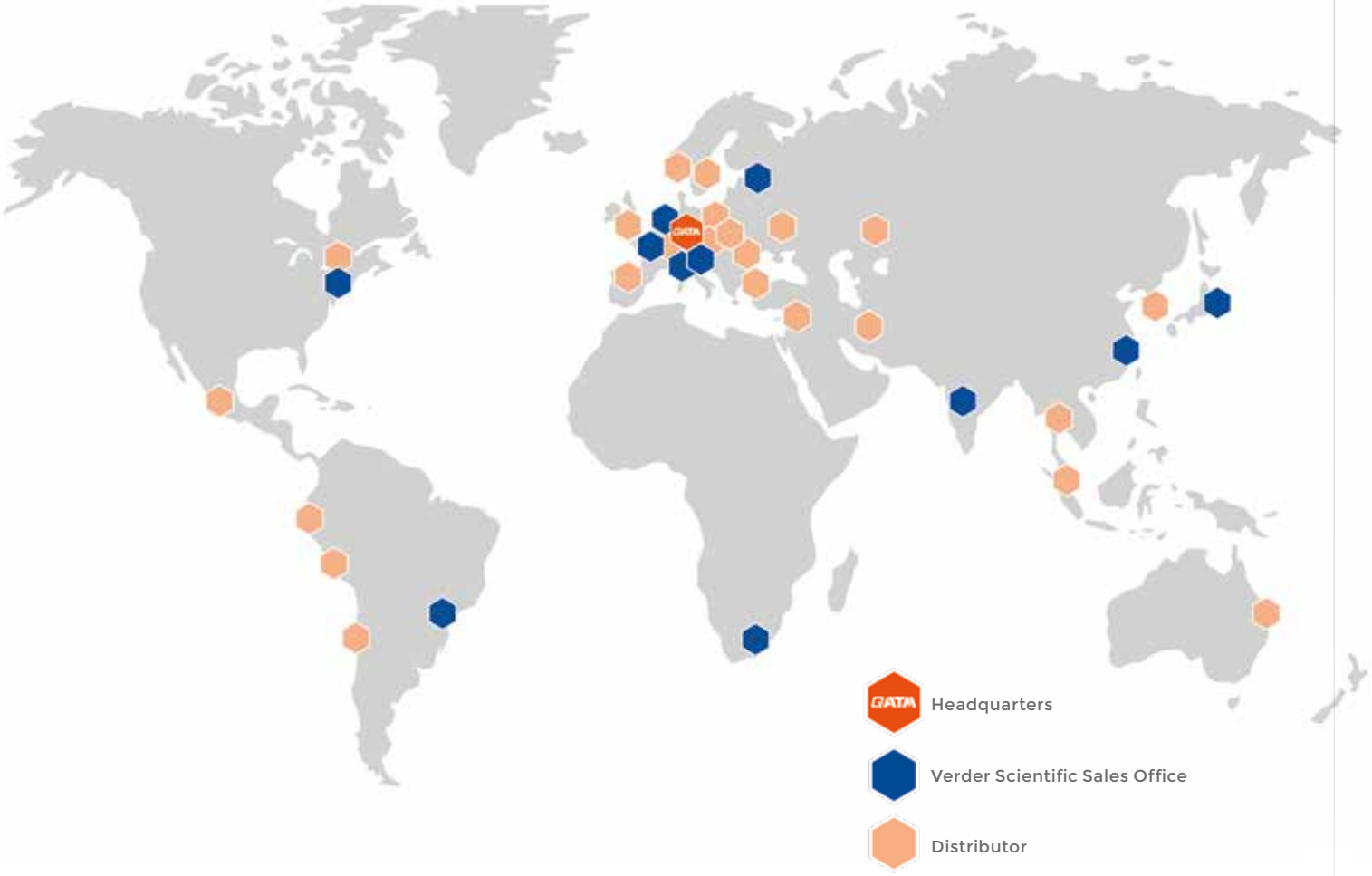
When you switch to the order data, you will immediately receive a pre-selected list. However, you can also easily set your own selection filters.

You also have the option of creating an inquiry list to receive a non-binding offer from us.

Expert Guide - Materialography/Metallography

A comprehensive guide is hereby provided to all who deal with materialographic sample preparation. The systematic structure with extensive documented examples is suitable for both beginners and experienced users who want to learn or look up a particular preparation technique. You will find numerous tips and tricks in this book, which can also prove useful for experienced practitioners. This is especially true when working on complex or uncommon test objects.

Excellent sales and service network throughout the world



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CONSUMABLES FOR POLISHING

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CONSUMABLES FOR HARDNESS TESTING

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MATERIALOGRAPHY & HARDNESS TESTING

Qprep

Consumables for cutting

Precision cutting

Precision cutting allows for cutting precisely adjacent to critical analysis areas and is particularly suitable for materials with highly complex properties. Precision cut-off wheels are significantly thinner than larger diameter cut-off wheels. With QPREP, you can choose from aluminum oxide, silicon carbide, diamond or CBN abrasives. The abrasives can be either electroplated, resin bonded, rubber bonded or bronze bonded. QPREP precision cut-off wheels are the ideal solution for cutting requirements with high surface quality and exact cutting accuracy.

PRODUCT ADVANTAGES

- Minimal material loss due to thin cut-off wheel thickness
- Allows cutting closer to the desired surface
- Allows cutting of small, sensitive, and very brittle specimens

RECOMMENDED APPLICATIONS

- Target and defect preparation
- Electronic component segmentation
- Preparing for thin sectioning specimens

ARBOR SIZE AND WHEEL DIAMETER (MAX.) FOR QATM PRECISION CUT-OFF MACHINES

Cut-off machine	Arbor size	Wheel diameter (max.)
Qcut 150 A	12.7 mm	203 mm/8"
Qcut 200 A	12.7 mm	203 mm/8"

Qprep Silicon carbide precision cut-off wheels

QPREP silicon carbide precision cut-off wheels offer the highest precision and surface finish when cutting complex components. Thanks to their tight manufacturing tolerances, they ensure a reliable and reproducible cutting process with a high degree of repeatability every time.

PRODUCT ADVANTAGES

- Excellent surface finish
- High repeatability
- Exact cutting precision

RECOMMENDED APPLICATIONS

- Optimal for cutting soft to medium-hard non-ferrous metals and alloys (e.g. copper, aluminum, and brass)
- For preparation of demanding materials such as titanium and titanium alloys
- Ensures precise cuts, ideal for accurate preparation of delicate components

	Item No.	Unit	Description			
			SILICON CARBIDE PRECISION CUT-OFF WHEELS			
			Ø	**Thickness**	**Arbor Size**	**Bond**
			• **for non-ferrous metals**			
NEW	95017765	5 Pcs.	100 mm	0.5 mm	12.7 mm	Resin
NEW	95017766	5 Pcs.	150 mm	0.8 mm	12.7 mm	Resin
	92004998	5 Pcs.	150 mm	1 mm	12.7 mm	Resin
	92004155	5 Pcs.	200 mm	1.5 mm	12.7 mm	Resin

Notes

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Qprep Aluminum oxide precision cut-off wheels

For precision cutting of ferrous materials, QPREP Aluminum oxide precision cut-off wheels are the optimal choice. These cut-off wheels are available in two different grain types (fine and coarse). Coarse-grained cut-off wheels are ideal for fast and efficient cuts on low-hardness materials and produce a rougher surface. Fine-grained cut-off wheels are excellent for precise and smooth cuts on higher hardness materials, but with lower cutting speeds.

PRODUCT ADVANTAGES

- The dense structure of the disc allows a longer lifetime
- Less wear and less heat between specimen and cut-off wheel

RECOMMENDED APPLICATIONS

- Suitable for a wide range of materials, especially various steel samples
- Cutting of high alloy steel
- Cutting of nitrided steel
- Allows cutting through mounted samples

Item No.	Unit	Description				
		ALUMINUM OXIDE PRECISION CUT-OFF WHEELS				
		Ø	**Thickness**	**Arbor Size**	**Grain size**	**Bond**
		Fine-grained **• for universal application of materials of higher hardness** **• precise cuts and high surface quality** **• optimal for delicate samples and sensitive materials**				
92002643	5 Pcs.	100 mm	0.25 mm	12.7 mm	fine grid	rubber
92002645	5 Pcs.	100 mm	0.4 mm	12.7 mm	fine grid	rubber
92002644	5 Pcs.	125 mm	0.45 mm	12.7 mm	fine grid	rubber
92002769	5 Pcs.	150 mm	0.45 mm	12.7 mm	fine grid	rubber
95014126	5 Pcs.	200 mm	0.45 mm	12.7 mm	fine grid	rubber
		Coarse-grained **• for universal use with lower hardness materials** **• ideal for rough geometries and mounted sample material** **• fast and efficient cuts**				
92002646	5 Pcs.	125 mm	0.8 mm	12.7 mm	coarse grid	rubber
92002770	5 Pcs.	150 mm	0.6 mm	12.7 mm	coarse grid	rubber
92002647	5 Pcs.	200 mm	0.8 mm	12.7 mm	coarse grid	rubber
92004159	5 Pcs.	150 mm	1 mm	12.7 mm	coarse grid	resin

Notes

Qprep Diamond precision cut-off wheels

For cutting hard materials, QPREP Diamond precision cut-off wheels are the optimal choice, as they cut materials such as ceramics without smearing. The bond is made of bronze. The diamonds edge area can be "dressed" to take full advantage of the cutting performance of the diamond particles again after a longer period of use.

PRODUCT ADVANTAGES

- Diamond as abrasive enables cutting of hardest materials
- Separates hard material without smearing
- The dressing functionality of our QATM cut-off machines ensures that the diamonds edge area always maintain maximum cutting performance

RECOMMENDED APPLICATIONS

- Dependence of diamond concentration on the toughness of the material
- The optimal choice of diamond concentration improves efficiency and lifespan of the cutting discs
- High concentrations (HC) are ideal for universal use, hard metals, carbides, and hard/soft composite materials
- Low concentrations (LC) are suitable for hard and brittle materials such as mineral samples, rock, glass, and ceramics

	Item No.	Unit	Description					
			DIAMOND PRECISION CUT-OFF WHEELS					
			Ø	**Thickness**	**Arbor Size**	**Grain size**	**Concen-tration**	**Bond**
			• **for universal application and carbides**					
	92002397	1 Pc.	75 mm	0.3 mm	12.7 mm	D181	HC	bronze
	92002401	1 Pc.	100 mm	0.3 mm	12.7 mm	D181	HC	bronze
	92002405	1 Pc.	125 mm	0.5 mm	12.7 mm	D213	HC	bronze
	92002409	1 Pc.	150 mm	0.5 mm	12.7 mm	D213	HC	bronze
	95016591	1 Pc.	175 mm	0.65 mm	12.7 mm	D213	HC	bronze
	95004814	1 Pc.	200 mm	0.5 mm	12.7 mm	D213	HC	bronze
			• **for glass, minerals as well as brittle and hard ceramic materials**					
	92002398	1 Pc.	75 mm	0.3 mm	12.7 mm	D181	LC	bronze
	92002402	1 Pc.	100 mm	0.3 mm	12.7 mm	D181	LC	bronze
	92002406	1 Pc.	125 mm	0.5 mm	12.7 mm	D213	LC	bronze
	92002410	1 Pc.	150 mm	0.5 mm	12.7 mm	D213	Extra LC	bronze
	95010518	1 Pc.	150 mm	0.5 mm	12.7 mm	D213	LC	bronze
	95008773	1 Pc.	150 mm	0.5 mm	12.7 mm	D213	LC	bronze
	92006368	1 Pc.	200 mm	0.6 mm	12.7 mm	D213	LC	bronze
	95015121	1 Pc.	200 mm	1.0 mm	12.7 mm	D151	LC	bronze
			• **for assembled printed circuit boards and filigree component geometries**					
	92002400	1 Pc.	75 mm	0.3 mm	12.7 mm	D91/107	HC	bronze
	92002404	1 Pc.	100 mm	0.3 mm	12.7 mm	D91/107	HC	bronze
	92002408	1 Pc.	125 mm	0.5 mm	12.7 mm	D91/107	HC	bronze
	92002412	1 Pc.	150 mm	0.5 mm	12.7 mm	D91/107	HC	bronze
			• **for mounted samples, composites, CFRP, GFRP and plastics**					
NEW	95012928	1 Pc.	200 mm	1.0 mm	12.7 mm	D64	LC	galvanic
	95007077	1 Pc.	200 mm	1.2 mm	12.7 mm	D126	LC	galvanic

Qprep CBN precision cut-off wheels

QPREP CBN precision cut-off wheels like the diamond precision cut-off wheels, are edged with a cubic boron nitride (CBN) abrasive in a bronze bond. The properties of CBN make it particularly suitable for composite and tough materials. Unlike other abrasives, CBN is not made of carbon, making it an optimal choice for specific applications.

PRODUCT ADVANTAGES

- The best cutting performance when cutting soft and hard materials
- Separates hard material without smearing
- The dressing functionality of our QATM cut-off machines ensures that the CBN particles edge area always maintain the highest cutting performance

RECOMMENDED APPLICATIONS

- Composites and materials with a combination of soft and hard materials
- Ductile materials
- Cutting hard ferrous materials

Item No.	Unit	Description		
		CBN PRECISION CUT-OFF WHEELS BOND: BRONZE		
		Ø	**Thickness**	**Arbor Size**
		• **for composites and rigid materials**		
92002444	1 Pc.	125 mm	0.5 mm	12.7 mm
92002445	1 Pc.	150 mm	0.65 mm	12.7 mm
92002446	1 Pc.	175 mm	0.9 mm	12.7 mm
92006419	1 Pc.	200 mm	0.5 mm	12.7 mm

Notes

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Qprep Saw blade cut-off wheel

The QPREP Saw blade cut-off wheel is particularly suitable for cutting materials with a high tendency to smearing.

PRODUCT ADVANTAGES

- The best performance when cutting non-metallic material
- Lower heat generation due to single engagement of the saw teeth during cutting
- Since there is no binding of abrasives, the disc is odor and dust free

RECOMMENDED APPLICATIONS

- Separation of non-metallic materials
- Separation of plastic materials
- Separation of polymers e.g., carbon fiber reinforced polymers

Item No.	Unit	Description		
		SAW BLADE CUT-OFF WHEEL		
		Ø	**Thickness**	**Arbor Size**
		• **for plastics, non-ferrous metals**		
95009083	1 Pc.	150 mm	1.4 mm	12.7 mm

Notes

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Cutting

The process of cutting, specifically wet abrasive cutting, is essential for materialographic sectioning of samples. In this process, cut-off wheels of different material thicknesses, abrasive particles and bonds are used on a corresponding wet abrasive cutting machine. These bond types can be synthetic resin, rubber, or metal. For the abrasives, aluminum oxide, silicon carbide, diamond or CBN is used. These abrasive particles are enclosed in a bond matrix.

PRODUCT ADVANTAGES

- Low thermal influence on the specimen during the cutting process
- Wet abrasive cutting achieves very fine surface finishes after cutting
- Optimum cutting shortens the further preparation process

RECOMMENDED APPLICATIONS

- Separation of relevant inspection areas
- Plane-parallel segmentation of semi-finished products and components
- Investigation of geological and mineralogical samples

ARBOR SIZE AND WHEEL DIAMETER (MAX.) FOR QATM CUT-OFF MACHINES

Cut-off machine	Arbor size	Wheel diameter (max.)
Brillant 230	32 mm	305 mm/12"
Qcut 250 M	32 mm	254 mm/10"
Qcut 250 A	32 mm	254 mm/10"
Qcut 350 A	32 mm	356 mm/14"
Qcut 400 A	32 mm	406 mm/16"
Qcut 500 A	32 mm	508 mm/20"
Qcut 600 A	32 mm	610 mm/24"
Qcut 600 BOT	32 mm	610 mm/24"

In materialography, the choice of cutting disc is crucial and depends on the hardness of the material, the bond of the cutting disc, and the abrasive used. The goal is to achieve high cutting quality, while maximizing the lifespan of the cutting disc.

HARD MATERIALS – SOFT BOND

Hard materials such as tool steels, highly alloyed steels, cemented carbides, or ceramics lead to strong abrasive wear. A soft bond ensures that worn particles break out quickly and new, sharp particles are released, guaranteeing consistent cutting performance. A hard bond, on the other hand, can lead to overheating and surface damage to the sample.

MEDIUM HARD MATERIALS – MEDIUM HARD BOND

For materials such as structural, low-alloy and tempered steels, a medium bond offers the best compromise between cutting quality and disc lifespan. A bond that is too soft would wear the disc too quickly, while a bond that is too hard slows down the cutting process and can lead to deformation of the workpiece.

SOFT MATERIALS – HARD BOND

Soft materials, such as aluminum and copper, exert little stress on the abrasive. A hard bond ensures that the abrasive particles remain in use for a long time, increasing the lifespan of the disc. A soft bond would lead to rapid particle loss and reduced cutting performance.

Notes

Premium cut-off wheels

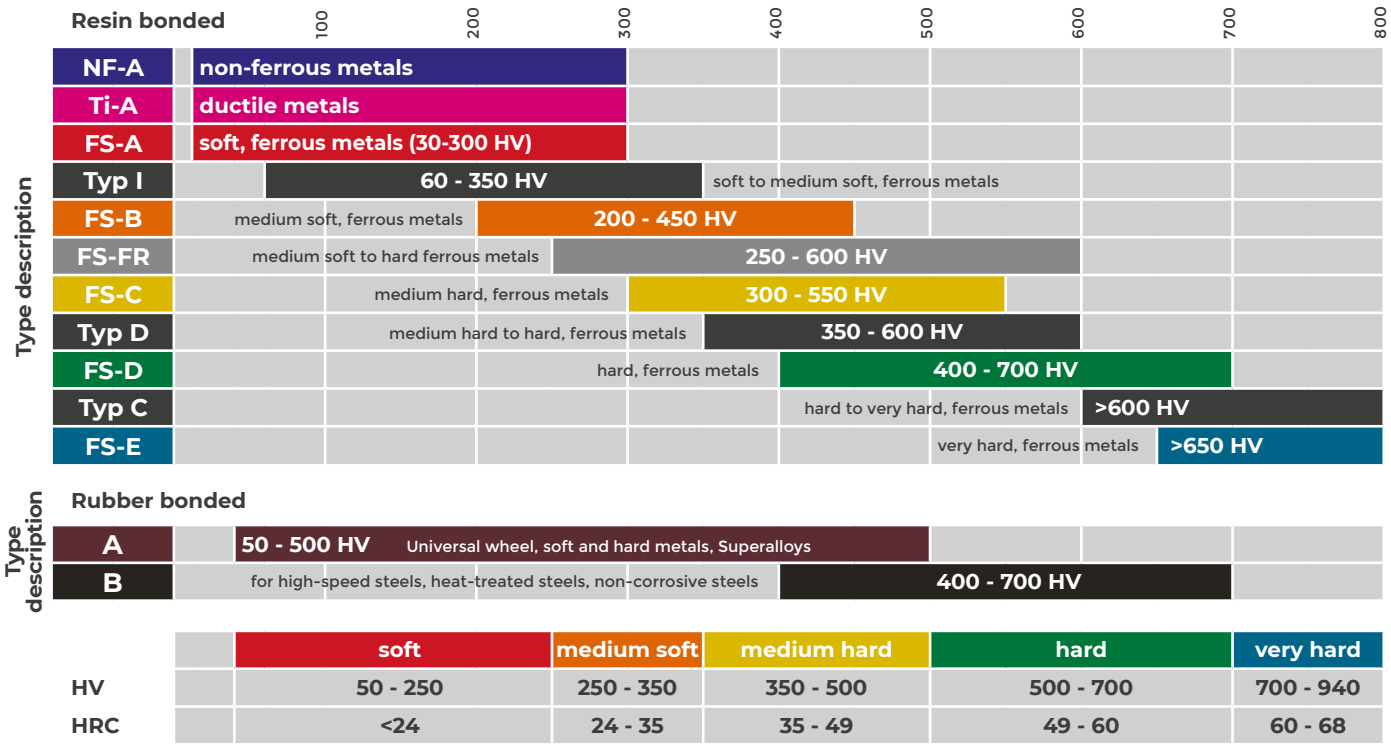
Significant properties for cut-off wheels are wear (i.e., abrasion resistance), long lifetime and cutting performance. Characteristics of the wheel composition are the abrasive used (aluminum oxide, silicon carbide, diamond, cubic boron nitride (CBN)) and the bond type (metal, resin or rubber). The goal of any cut is to separate the material with minimal deformation and temperature effect. For a clean cut, the abrasive particles and bond type of the cut-off wheel should be matched to the material being cut.

QPREP Premium cut-off wheels offer the optimal solution for a wide range of applications.

- **Achieve a fine cutting surface**
- **Wide range of cut-off wheels for cutting all materials**
- **The best cutting function fitting to the material**
- **Low deformation and temperature during the cutting process**
- **Very good cutting performance with long lifetime**

The color coding of the premium cut-off wheels enables quick, visual assignment and identification of the several types:

CUT-OFF WHEEL SELECTION ACCORDING TO MATERIAL HARDNESS



	soft	medium soft	medium hard	hard	very hard
HV	50 - 250	250 - 350	350 - 500	500 - 700	700 - 940
HRC	<24	24 - 35	35 - 49	49 - 60	60 - 68

Notes

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Qprep Premium Silicon Carbide cut-off wheels

Due to the lower hardness of silicon carbide particles compared to aluminum oxide particles, these premium cut-off wheels are the optimal choice for cutting soft as well as non-ferrous materials.

PRODUCT ADVANTAGES

- Optimized cutting performance for non-ferrous metals and ductile metals
- Long lifetime and low wear of the cut-off wheel

RECOMMENDED APPLICATIONS

- QPREP Premium silicon carbide cutting disc **NF-A** is suitable for cutting soft (e.g., copper, aluminum, brass) and medium-hard non-ferrous metals and alloys (e.g., bronze, Monel, gunmetal, AlMn1Cu vs. AlMgSi0.5) as well as hard non-metallic materials (e.g., glass, stone).
- QPREP Premium silicon carbide cutting disc **Ti-A** for cutting non-ferrous metals, Ti alloys (e.g., Ti6Al4V, Ti5Al2.5Sn), and refractory metals (e.g., molybdenum, tantalum, niobium)

Item No.	Unit	Description		
		PREMIUM SILICON CARBIDE CUT-OFF WHEELS BOND: RESIN		
		Ø	**Thickness**	**Arbor Size**
		Type NF-A, Purple • **for non-ferrous metals (30-300 HV)**		
95012531	10 Pcs.	250 mm	1.5 mm	32 mm
95012538	10 Pcs.	300 mm	2.0 mm	32 mm
95012545	10 Pcs.	350 mm	2.5 mm	32 mm
95012552	10 Pcs.	400 mm	3.0 mm	32 mm
95012566	5 Pcs.	500 mm	4.0 mm	32 mm
95012573	5 Pcs.	600 mm	4.5 mm	32 mm
		Type Ti-A, Pink • **for titanium and alloys, refractory metals (30-300 HV)**		
92002417	10 Pcs.	230 mm	1.5 mm	32 mm
95012530	10 Pcs.	250 mm	1.5 mm	32 mm
95012537	10 Pcs.	300 mm	2.0 mm	32 mm
92002427	10 Pcs.	350 mm	2.5 mm	32 mm
92002428	10 Pcs.	400 mm	3.0 mm	32 mm

Notes

Qprep Premium Aluminum Oxide cut-off wheels

QPREP Premium Aluminum Oxide cut-off wheels cover a wide range of materials from 30 HV to >650 HV.

PRODUCT ADVANTAGES

- Wide range of application for various materials with different hardnesses
- Long lifetime as well as low wear of the cut-off wheel
- Premium abrasive particles enable the finest cutting surfaces, which shortens the following grinding steps
- The synthetic resin bond allows dull abrasive particles to break out evenly during the cutting process
- Long service life and low wear of the cutting disc

RECOMMENDED APPLICATIONS

- Cutting of all materials

Item No.	Unit	Description		
		PREMIUM ALUMINUM OXIDE CUT-OFF WHEELS BOND: RESIN		
		Ø	**Thickness**	**Arbor Size**
		Type FS-A, Red • **for soft steel (30-300 HV), non-ferrous metals, polymer (e.g., PMMA, PEEK, PTFE) due to hard bonding**		
95012529	10 Pcs.	250 mm	1.5 mm	32 mm
95012536	10 Pcs.	300 mm	2.0 mm	32 mm
95012543	10 Pcs.	350 mm	2.5 mm	32 mm
95012550	10 Pcs.	400 mm	3.0 mm	32 mm
95012564	5 Pcs.	500 mm	4.0 mm	32 mm
95012571	5 Pcs.	600 mm	4.5 mm	32 mm
		Type I • **ideal for cutting structural steel (e.g., S235JR, S355J2, C45) and cast materials (e.g., ductile iron, gray cast iron, cast steel) (60-350 HV)**		
92006066	10 Pcs.	250 mm	1.6 mm	32 mm
92005863	10 Pcs.	300 mm	2.0 mm	32 mm
92005862	10 Pcs.	350 mm	2.5 mm	32 mm
92008504	10 Pcs.	400 mm	3.0 mm	32 mm
		Type FS-B, Orange • **for medium soft steel (200-450 HV), e.g. unalloyed structural steels and low-alloy steels**		
95012528	10 Pcs.	250 mm	1.5 mm	32 mm
95012535	10 Pcs.	300 mm	2.0 mm	32 mm
95012542	10 Pcs.	350 mm	2.5 mm	32 mm
95012549	10 Pcs.	400 mm	3.0 mm	32 mm
95012563	5 Pcs.	500 mm	4.0 mm	32 mm
95012570	5 Pcs.	600 mm	4.5 mm	32 mm

Item No.	Unit	Description		
		PREMIUM ALUMINUM OXIDE CUT-OFF WHEELS BOND: RESIN		
		Ø	**Thickness**	**Arbor Size**
		Type FS-FR, fabric reinforced • **for medium soft to hard steels (250-600 HV)** • **> 30% wear reduction** • **ideal for manual cutting**		
95017540	10 Pcs.	250 mm	1.5 mm	32 mm
95017541	10 Pcs.	300 mm	2.0 mm	32 mm
95017542	10 Pcs.	350 mm	2.5 mm	32 mm
95017543	10 Pcs.	400 mm	3.0 mm	32 mm
		Type FS-C, Yellow • **for medium hard steel (300-550 HV), case hardened, nitrided steels**		
95012527	10 Pcs.	250 mm	1.5 mm	32 mm
95012534	10 Pcs.	300 mm	2.2 mm	32 mm
95012541	10 Pcs.	350 mm	2.2 mm	32 mm
95012548	10 Pcs.	400 mm	3.0 mm	32 mm
95012562	5 Pcs.	500 mm	4.0 mm	32 mm
95012569	5 Pcs.	600 mm	4.5 mm	32 mm
		Type D • **universally applicable for medium material hardness and case-hardened steels (350-600 HV), e.g., tempered steel 42CrMo4, CuSn8**		
92001555	10 Pcs.	250 mm	1.5 mm	32 mm
92001559	10 Pcs.	300 mm	2.0 mm	32 mm
92001670	10 Pcs.	350 mm	2.0 mm	32 mm
92001784	10 Pcs.	400 mm	3.0 mm	32 mm
		Type FS-D, Green • **for hard steels (400-700 HV), annealed, carburised steels**		
95012526	10 Pcs.	250 mm	1.5 mm	32 mm
95012533	10 Pcs.	300 mm	2.0 mm	32 mm
95012540	10 Pcs.	350 mm	2.5 mm	32 mm
95012547	10 Pcs.	400 mm	3.0 mm	32 mm
95012561	5 Pcs.	500 mm	4.0 mm	32 mm
95012568	5 Pcs.	600 mm	4.5 mm	32 mm
		Type C • **universally applicable for materials of high and very high hardness (>600 HV), e.g., martensitic stainless steels, WC-Co, carbide**		
92001554	10 Pcs.	250 mm	1.5 mm	32 mm
92001558	10 Pcs.	300 mm	2.0 mm	32 mm
92001669	10 Pcs.	350 mm	2.0 mm	32 mm
92001783	10 Pcs.	400 mm	3.0 mm	32 mm
		Type FS-E, Blue • **for very hard steels (>650 HV), e.g., CrV, manganese steel**		
95012525	10 Pcs.	250 mm	1.5 mm	32 mm
95012532	10 Pcs.	300 mm	2.0 mm	32 mm
95012539	10 Pcs.	350 mm	2.5 mm	32 mm
95012546	10 Pcs.	400 mm	3.0 mm	32 mm
95012560	5 Pcs.	500 mm	4.0 mm	32 mm
95012567	5 Pcs.	600 mm	4.5 mm	32 mm

Item No.	Unit	Description		
		PREMIUM ALUMINUM OXIDE CUT-OFF WHEELS BOND: RUBBER		
		Ø	**Thickness**	**Arbor Size**
		Type A, Brown **• universal wheel, soft and hard metals, superalloys (50-500 HV)**		
92002413	10 Pcs.	229 mm	0.8 mm	32 mm
92002599	10 Pcs.	254 mm	1.0 mm	32 mm
92002441	10 Pcs.	305 mm	1.0 mm	32 mm
92002436	10 Pcs.	356 mm	1.6 mm	32 mm
92002439	10 Pcs.	400 mm	1.6 mm	32 mm
92008537	10 Pcs.	500 mm	2.4 mm	32 mm
92004007	10 Pcs.	600 mm	4.3 mm	40 mm
		Type B, Black **• for high-speed steels, heat-treated steels, non-corrosive steels (400-700 HV)**		
92002414	10 Pcs.	229 mm	1.6 mm	32 mm
92002600	10 Pcs.	254 mm	1.6 mm	32 mm
92002434	10 Pcs.	305 mm	1.6 mm	32 mm
92002437	10 Pcs.	356 mm	2.4 mm	32 mm
92002440	10 Pcs.	400 mm	2.4 mm	32 mm
92008874	10 Pcs.	500 mm	3.0 mm	32 mm

Notes

Qprep Premium Diamond cut-off wheels

QPREP Premium Diamond cut-off wheels are used for hard materials (ceramics, glass fiber reinforced plastics, minerals and rocks, glass or similar). There are two different bond variants to choose from: metallic, in which the diamonds are usually bound in a bronze bond, or the bond with synthetic resin.

PRODUCT ADVANTAGES

- Two different bond types (bronze and resin) for a wide range of applications.
- The dressing functionality of our QATM cut-off machines ensures that the diamonds edge area always maintain maximum cutting performance
- Long lifetime as well as low wear of the cut-off wheel

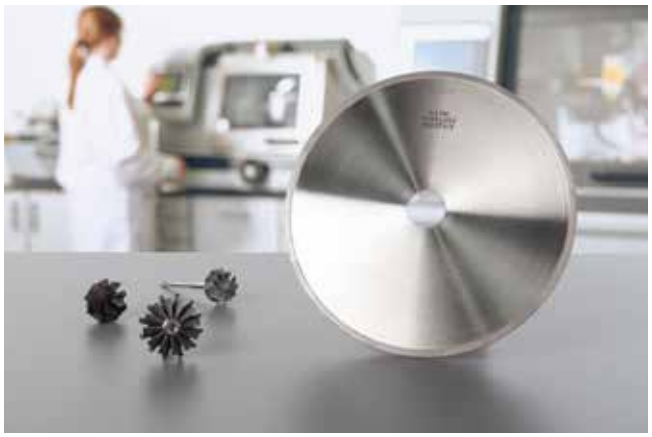
RECOMMENDED APPLICATIONS

- Cutting ceramic materials (Al_2O_3, YS-ZrO_2, B_4C) and (hard) composite materials (WC-Co, CMC, and MMC) with bronze-bonded diamond precision cutting discs
- Cutting hard and brittle materials (hard metals, BN, Al_2O_3 ceramics) with resin-bonded diamond cutting discs
- Cutting brittle coating surfaces (hard metal tools with titanium nitride, DLC-coated components, ZrO_2-coated turbine blades)
- High concentrations (HC) ideal for universal use, hard metals, and hard/soft composite materials
- Low concentrations (LC) for hard and brittle materials such as mineral samples, rock, glass, and ceramics

Item No.	Unit	Description				
		PREMIUM DIAMOND CUT-OFF WHEELS BOND: BRONZE				
		Ø	**Thickness**	**Arbor Size**	**Grain size**	**Concen-tration**
		• for ceramic materials				
92002452	1 Pc.	250 mm	1.2 mm	32 mm	D181	LC
92002453	1 Pc.	300 mm	1.6 mm	32 mm	D181	LC
95003433	1 Pc.	350 mm	1.6 mm	32 mm	D181	LC
92008751	1 Pc.	400 mm	2.4 mm	32 mm	D181/213	LC
		• for composite materials (hard/soft combinations)				
95002102	1 Pc.	250 mm	1.3 mm	32 mm	D126/151	HC
92004719	1 Pc.	300 mm	1.3 mm	32 mm	D126/151	HC
92008619	1 Pc.	350 mm	1.3 mm	32 mm	D126/151	HC
95006793	1 Pc.	400 mm	1.3 mm	32 mm	D126/151	HC
		other diameters on request				
		PREMIUM DIAMOND CUT-OFF WHEELS BOND: RESIN				
		Ø	**Thickness**	**Arbor Size**	**Grain size**	**Concen-tration**
		• for hard metals, for materials with high hardness (>700 HV)				
92002451	1 Pc.	250 mm	1.2 mm	32 mm	D126/151	HC
92002454	1 Pc.	300 mm	1.6 mm	32 mm	D126	HC
95003049	1 Pc.	350 mm	1.6 mm	32 mm	D126	HC
95010131	1 Pc.	400 mm	1.6 mm	32 mm	D126	HC
		other diameters on request				

Qprep Premium CBN cut-off wheels

QPREP Premium CBN cut-off wheels made of cubic boron nitride (CBN) provide a fine cutting surface for nickel and cobalt-based alloys. The high hardness as well as the high ductility of the CBN particles improve the cutting ability of the cut-off wheel with significantly less wear. The CBN abrasives in these discs maintain cutting performance over a longer period, which improves the cutting ability of the cut-off wheels. Unlike other abrasives, CBN does not consist of carbon, making it an optimal choice for specific applications.



PRODUCT ADVANTAGES

- The good thermal conductivity of CBN abrasives can dissipate heat generated during cutting much more effectively
- Long lifetime as well as low wear of the cut-off wheel
- The dressing functionality of our QATM cut-off machines ensures that the CBN particles edge area always maintain the highest cutting performance

RECOMMENDED APPLICATIONS

- For the cutting of composite materials (e.g. CFK, GFK, BFK)
- For cutting very hard steels (e.g. CrV, MnCr, CrMoV)

Item No.	Unit	Description		
		PREMIUM CBN CUT-OFF WHEELS BOND: BRONZE		
		Ø	**Thickness**	**Arbor Size**
		• **for composites and rigid materials**		
92002456	1 Pc.	250 mm	1.6 mm	32 mm
92002457	1 Pc.	300 mm	1.6 mm	32 mm
95005025	1 Pc.	350 mm	1.6 mm	32 mm
92004473	1 Pc.	400 mm	1.6 mm	32 mm

Notes

Qprep Coolant and anti-corrosion agent

Optimum cooling is essential during cutting. Excessive heat generation during the cutting process damages the specimen as well as the cutting wheel. QPREP coolant and anti-corrosion agent help to dissipate the heat and remove chips at the cutting point. A corrosion inhibitor must be added to the coolant, otherwise there is a risk of oxidation on the cut-off surface of the specimen as well as on machine components.

PRODUCT ADVANTAGES

- QPREP coolant and anti-corrosion agent are suitable for all types of cut-off machines
- QPREP ATM CoolCut is known for its environmentally and user-friendly handling
- QPREP coolant and anti-corrosion agent minimize the risk of thermal damage and corrosion during the cutting process

RECOMMENDED APPLICATIONS

- Cutting additive for all and especially corrosive sensitive materials
- When cutting coated samples that have been coated in a salt bath, the QPREP Defoamer should be used
- For cutting polymers and composites, the use of the QPREP coolant and anti-corrosion agent for plastics and composites is recommended
- QPREP ATM-CoolAdd CU is an additive to the cooling lubricant for specific requirements when cutting specific materials

Item No.	Unit	Description
		ATM-COOLCUT, ENVIRONMENT- AND USER-FRIENDLY
		Mixing ratio 1:25 (4%) – 1:17 (6%) / refractometer: 2.0%/°Bx
		• **for steel, cast iron, light and non-ferrous metal, glass and ceramics, composites** • **free of oil, boron, nitride and formaldehyde** • **optimized anti-corrosion protection and cutting properties**
95004145	1 l	ATM-CoolCut, concentrate
95004146	5 l	ATM-CoolCut, concentrate
95004147	10 l	ATM-CoolCut, concentrate
		ANTI CORROSION COOLANT FOR POLYMERS AND COMPOSITES
		Mixing ratio: 1:66 (1.5%) - 1:33 (3%) / refractometer: 2.4%/°Bx
		• **optimized for polymers and composites** • **free of nitride and oil** • **also suitable for steels, non-ferrous metals, ceramics and glasses**
95007864	1 l	Concentrate
		ANTI CORROSION COOLANT, STANDARD
		Mixing ratio 1:35 / refractometer: 1.4%/°Bx
		• **for steel, cast iron, non-ferrous metal**
95014280	1 l	Concentrate
95014281	5 l	Concentrate
95014282	10 l	Concentrate

Item No.	Unit	Description
		COOLING AGENT ADDITIVES
		ATM-CoolAdd CU
95008731	1 l	ATM-CoolAdd CU, additive for Cu/non-ferrous metal processing (0.05-0.2% dosage in ATM-CoolCut) • reduces heavy metal ions concentration, protects surfaces, promotes filterability • supports machine functionality
		Defoaming agent
95014584	200 ml	Defoaming agent, additive for water-based coolants Mixing concentration in aqueous coolant approx. 0.005 - 0.05%
95014583	1 l	Defoaming agent, additive for water-based coolants Mixing concentration in aqueous coolant approx. 0.005 - 0.05%
		ATM-PreClean
92006502	1 kg	ATM-PreClean, cleaning concentrate/system cleaner for circulating cooling units and cutting machines

Qprep Accessories & Tools

For inspection as well as effective working with QPREP cut-off wheels and QPREP cooling and anti-corrosion agents, QATM offers accessories & tools.

Item No.	Unit	Description
		ACCESSORIES FOR MAINTENANCE AND CARE OF COOLANTS
		Maintenance and testing set
95007866	1 Set	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

		ACCESSORIES FOR MAINTENANCE AND CARE OF CUT-OFF MACHINES
		Corrosion protection- and care spray
95016408	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)

		ACCESSORIES FOR CUT-OFF WHEELS
		Dressing stone
92002460	1 Pc.	Dressing stone for diamond cut-off wheels, CBN cut-off wheels and cup wheels

Qprep Filter systems

During cutting, various residual materials are produced from the specimen (chips) and from the cut-off wheel (wear/tear). To prevent these residual materials from entering the cooling water / waste water system or the pump mechanism, the use of filter systems is required. A suitable filter system with the correct mesh size, filter material and dimension has a significant influence on the cleanliness of the coolant.

PRODUCT ADVANTAGES

- Various QPREP filter systems for different cut-off machines, from precision machines to floor standing machines.
- QPREP filter systems protect the cutting machine and thus increase its lifetime.
- The different mesh sizes of the filters offer an application-oriented selection of the appropriate filter system for the corresponding recirculating cooling unit.

RECOMMENDED APPLICATIONS

- The use of a filter system keeps the coolant significantly longer clean and prevents damage to the pump and machine.

Item No.	Unit	Description		
		FILTER INSERTS		
			Dimensions	**Mesh size**
		for Brillant 255 / Qcut 400 A (Brillant 265) / Brillant 270 / Qcut 500 A (Brillant 275) / Brillant 280		
95017301	5 Pcs.	Filter cloth and fleece	490 x 290 x 190 mm	60 µm
95017302	5 Pcs.	Filter cloth and fleece	490 x 290 x 190 mm	100 µm
95017303	5 Pcs.	Filter cloth and fleece	490 x 290 x 190 mm	800 µm
		for recirculation cooling system 45 Ltr. (until year of construction 2012)		
95017304	5 Pcs.	Filter cloth and fleece	290 x 150 x 190 mm	60 µm
95017305	5 Pcs.	Filter cloth and fleece	290 x 150 x 190 mm	100 µm
95017306	5 Pcs.	Filter cloth and fleece	290 x 150 x 190 mm	800 µm
		for recirculation cooling system 45 Ltr. (from year of construction 2013)		
95017307	5 Pcs.	Filter cloth and fleece	250 x 200 x 155 mm	60 µm
95017308	5 Pcs.	Filter cloth and fleece	250 x 200 x 155 mm	100 µm
95017309	5 Pcs.	Filter cloth and fleece	250 x 200 x 155 mm	800 µm

		FILTER BASKET	
			Dimensions (WxHxD)
		Hanging basket made of stainless steel for the collection of the chip abrasion • **can be hooked into 45 liter recirculating cooling unit**	
Z5800008	1 Pc.	Filter Basket	140 x 80 x 200 mm

Item No.	Unit	Description	
		FILTER FLEECE FOR BELT FILTER SYSTEMS	
			Length x Width
		for belt filter system BFA 285	
92008780	1 Pc.	Filter fleece roll, coarse, 150 µm	100 m x 710 mm
		for belt filter system BFA 100/130	
95001696	1 Pc.	Filter fleece roll, coarse, 150 µm	100 m x 420 mm
		other sizes on request	
		FILTER FLEECE MAT FOR RECIRCULATION COOLING SYSTEMS	
			Length x Width
		for Qcut 800 A (Brillant 2000)	
95016233	5 Pcs.	Filter fleece mat	940 x 720 mm
		for Qcut 600 A (Brillant 285)	
95016231	5 Pcs.	Filter fleece mat	724 x 720 mm
		for recirculation cooling system 15 Ltr. (Qcut 150 A/M)	
95017314	5 Pcs.	Filter fleece mat	235 x 148 mm

Notes

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MATERIALOGRAPHY & HARDNESS TESTING

Qprep

Consumables for mounting

Mounting

Mounting is a process used to prepare specimens for materialographic preparation and analysis. The sample to be examined is encapsulated in a solid or liquid mounting compound. After curing, the mounting compound forms a protective shell around the sample. This allows for easier handling of fragile specimens, transforms multiple specimens of different geometries into uniform shapes of the same dimensions, and provides better edge retention of the specimens.

Depending on the laboratory facilities and the requirements of the resin, different mounting methods can be used. There are hot mounting, cold mounting, and light-induced mounting.

WHEN IS MOUNTING ABSOLUTELY NECESSARY?

- For unwieldy samples with small or complicated dimensions
- For delicate sample material, e.g., soft, brittle, fragile, porous, filigree
- For simultaneous automatic preparation of larger sample quantities
- For the protection and examination of edge zones with coatings such as nitriding, hard coatings, plasma spray, or paint layers
- For further processing with semi- or fully automatic grinding and polishing devices, guiding in sample holders of necessary consistent size, i.e., the sample diameter is set.

Generally, samples are mounted after cutting. However, for additional protection, components can also be mounted before the cutting operation. The criteria for choosing hot, cold, or UV mounting in relation to the mounting medium include hardness, abrasion resistance, shrinkage, mounting behavior (e.g., viscosity behavior), and chemical resistance. Additionally, process-related parameters such as mounting duration, sample throughput, and simplicity of the mounting process must be compatible with sample material-dependent parameters such as temperature, pressure, UV resistance, number of samples, size and geometry, porosity, and the analysis objective.

5 questions for choosing the right mounting method and the right mounting material

1. **Is my component sensitive to pressure or temperature?**
2. **How hard is my material?**
3. **How complex is the geometry of my sample?**
4. **How much time and effort can I invest?**
5. **What are the quality requirements for the preparation?**

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Selection of the mounting method

Hot mounting

- Hot mounting is carried out in hot mounting presses at high pressures and temperatures.
- Thermosetting mounting materials for high hardness and thermoplastic mounting materials for transparent mountings are available as hot mounting materials.
- Hot mounting provides the best edge retention and planarity and is ideal for wet chemical etching.
- QPREP cold mounting materials are suitable for heat- or pressure-sensitive samples.

Cold mounting

- Cold mounting uses chemical reactions to cure the mounting material, with acrylic resins, epoxy resins, and polyester resins available.
- The selection is based on properties such as reaction time, removal rate, and hardness.
- Cold mounting can be used for a variety of sample materials and shapes in various sizes.

UV mounting

- UV mounting materials consist of filler-free modified acrylic resins.
- They are cured under UV irradiation within a narrow wavelength range and require specially designed equipment.
- The UV initiators present in the resin absorb UV radiation for the initiation of the reaction.
- UV mounting is the fastest method without the need for high pressures or external heat.
- The 1-component systems used do not require mixing, result in transparent mountings, and enable safe work in the laboratory.

Hot mounting material

High quality and plane parallel mounting

Qprep BAKELIT BLACK / RED / GREEN
- For standardized routine mounting of soft to medium hard materials

Qprep THERMOPLAST
- For transparency and target preparation of soft materials

Qprep EPO Black / EPO-Max
- For particularly hard, corrosion and wear-resistant materials and outstanding edge retention

Cold mounting material

For hard coatings and surfaces

Polyester resin:

Qprep KEM 15 Plus
- For optimal edge retention and lowest shrinkage, fast curing (25 minutes)

Cold mounting material

For best adhesion and transparency

Epoxy resins:

Qpox 90
- For low curing temperatures and low viscosity (35°C at RT)

Qpox 94
- For low curing times and same day preparation (9 h at RT / 3 h at 45°C)

Qpox 92
- For maximum transparency and hardness (glass clear, 81 Shore D)

UV mounting material

For high sample throughput

UV resins:

Qprep UV 50
- For fast & safe mounting in ~60 seconds
- User-friendly, no mixing required!

Qprep UV 55
- For transparent and low gap mounting in ~10 minutes
- User-friendly, no mixing required!

Additional resins

for routine analysis

Methacrylic resins:

KEM 20
- For transparent mounting

KEM 30
- For fast mounting (5 minutes)

KEM 35
- For hard materials (87 Shore D)

KEM 60
- Universal application

General Information on Mounting

To avoid the formation of edge gaps between the sample material and the mounting medium, several parameters must be considered:

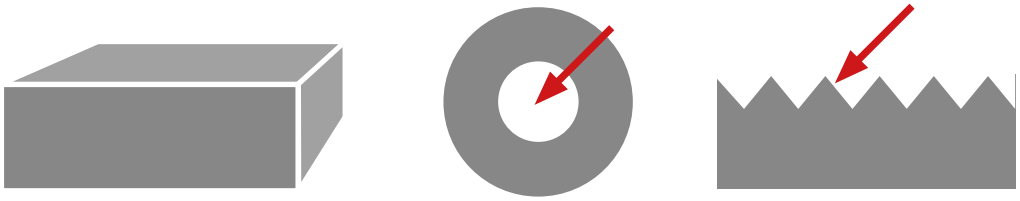
- Sample geometry
- Arrangement of the samples in the mounting mould
- Preparation of the sample (degreasing, cleaning)
- Thermal conductivity (and mass) of the sample material: The risk of gap formation increases the faster the mounting material cools (special caution with filler-free systems and methacrylates).

SAMPLE GEOMETRY

Both the sample geometry and the arrangement of the samples or the distances of the samples to the mounting mould can lead to different results.

Too small distances between the individual samples or to the edge of the mould can cause gap formation and promote crack formation (a distance of about 2-3 mm should be maintained).

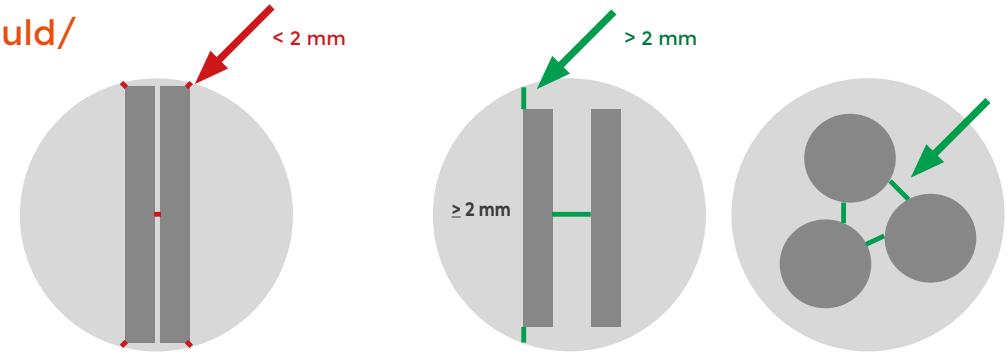
Geometry



SIMPLE

DEMANDING

Distance Sample–Mounting mould/ Sample–Sample

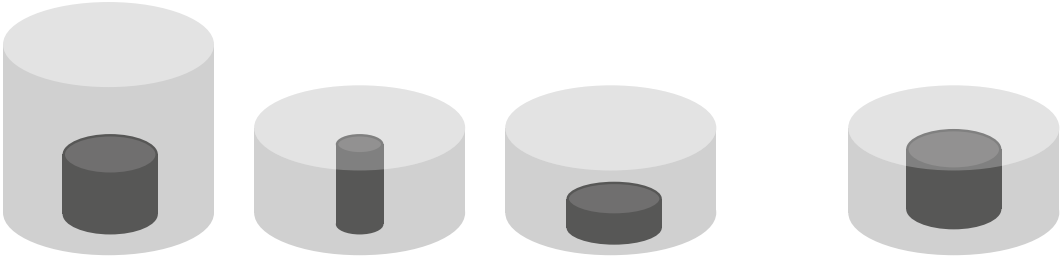


WRONG

CORRECT

Optimizing process time

The heating and cooling times during hot mounting are limited by the low thermal conductivity of the mounting materials. To shorten the process time, the heat path through the resin should be minimized, and maximum thermal conductivity to the sample should be ensured. For metallic samples, the times can be significantly reduced by optimizing the amount of mounting material, choosing the smallest mounting diameter, using the correct sample dimensions, and maximizing the contact area with the press cylinder.



BAD

BAD

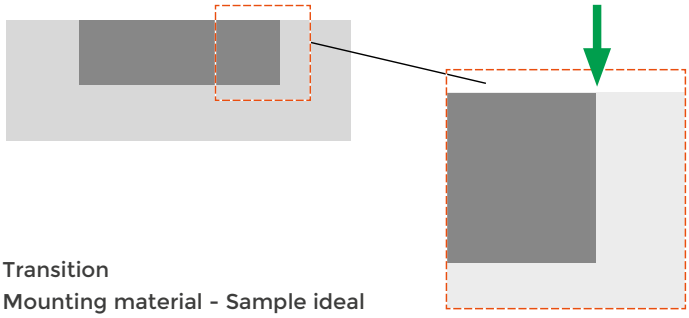
BAD

GOOD

Hardness of mounting material

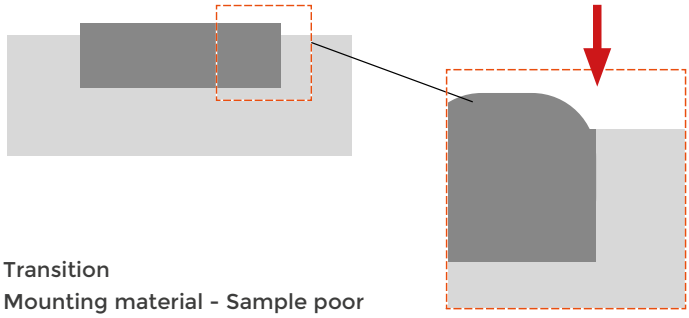
For a sharp-edged preparation and protected edge areas, it is absolutely critical to consider the correct hardness of the mounting material.

Equal hardness for sample and mounting material



Transition
Mounting material - Sample ideal

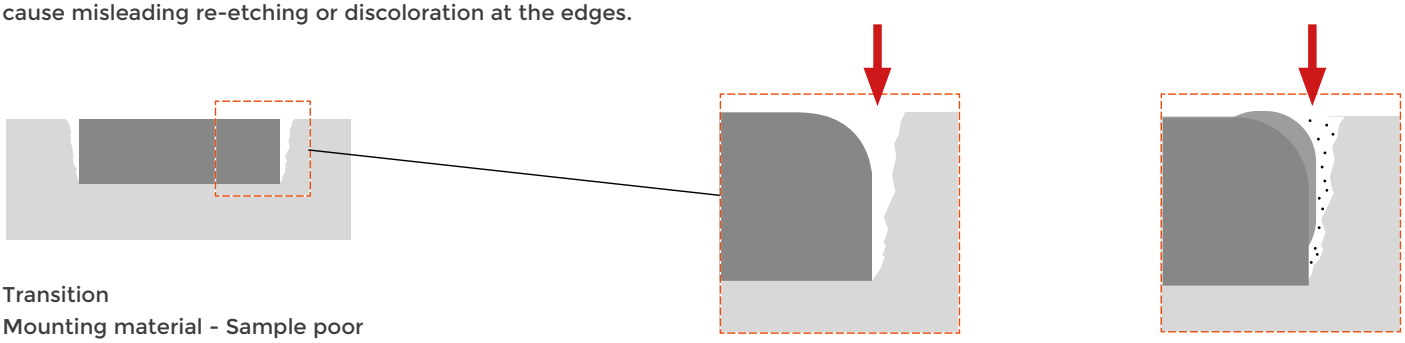
Different hardness for sample and mounting material



Transition
Mounting material - Sample poor

Gap-formation

The mounting should be as gap-free as possible. Edge gaps and rounded edges pose the risk of carrying over dirt and grinding or polishing particles, which can deteriorate the preparation result. Additionally, flowing etching agents or cleaning alcohol can often cause misleading re-etching or discoloration at the edges.



Transition
Mounting material - Sample poor

Notes

Hot mounting

Hot mounting is a process that involves compressing materialographic specimens in ground resin granules in a plane-parallel manner with the aid of a closed cylinder.

The hot mounting technique ensures high edge retention, provides an optimal edge protection. Due to the gap-free adhesion to the specimen surface it is particularly suitable for wet chemical etching after Polishing. With the Qpress 50 hot mounting press, even higher specimen throughputs can be efficiently hot mounted due to its modular design. For heat- or pressure-sensitive specimens, we recommend mounting using QPREP cold mounting media.

QPREP hot mounting materials are specifically chosen plastic granules consists of various base polymers.

BENEFITS

- Good edge retention
- High degree of hardness of the mounting material
- High plane parallelism
- Easy sample marking by engraving or labelling

PROPERTIES OF HOT MOUNTING MATERIALS

Mounting material	Recommended Application	Basis/ Filler	Hardness (Shore D)	Removal rate (grindability)
EPO BLACK	High edge retention, edge examination, medium-hard to hard materials	Epoxy resin/ mineral and glass fibre	93	very low
EPO-MAX	High edge retention, edge examination, medium-hard to hard materials, easy cleaning of mould and ram due to low adhesion	Epoxy resin/mineral	93	very low
DUROPLAST BLACK	Conductive, SEM-analysis, electrolytic polishing	Phenolic resin/ graphite	89	medium
THERMOPLAST	Transparent mounting, targeted preparation, good for padding, marking	Acrylic resin	86	medium
BAKELIT BLACK	Routine work, soft to medium-hard materials, good for padding	Phenolic resin/ wood flour and graphite	90	medium
BAKELIT GREEN	Routine work, soft to medium-hard materials, good for padding	Phenolic resin/ wood flour	90	medium
BAKELIT RED	Routine work, soft to medium-hard materials, good for padding	Phenolic resin/ wood flour	90	medium

Notes

Qprep EPO BLACK

QPREP EPO BLACK is a fine granular, epoxy resin based thermosetting hot mounting material.

PRODUCT ADVANTAGES

- Very low gap formation
- High edge retention and plane parallelism
- Contains a high filler content of glass and minerals for good machinability
- Hardness (Shore D): 93
- Removal rate: Very low

RECOMMENDED APPLICATIONS

- Routine applications
- Edge examination
- Mounting of medium-hard to hard materials

Item No.	Unit	Description
NEW FORMULA!		HOT MOUNTING MATERIAL EPO BLACK
95011990	1 kg	EPO BLACK
95011991	5 kg	EPO BLACK
95011992	10 kg	EPO BLACK

Qprep EPO-MAX

QPREP EPO MAX is an epoxy resin compound for hot mounting with high edge retention. It is optimized for low adhesion on mould and ram surfaces. **EPO-MAX is currently our fastest hot mounting material!**

PRODUCT ADVANTAGES

- Very low gap formation
- High edge retention and plane-parallelism
- Easy Cleaning of mould and ram due to low adhesion
- Contains high contents of mineral filler
- Hardness (Shore D): 93
- Removal rate: Very low

RECOMMENDED APPLICATIONS

- Edge examinations
- Mounting of medium-hard to hard materials

Item No.	Unit	Description
		HOT MOUNTING MATERIAL EPO-MAX
95013811	1 kg	EPO-MAX
95013812	5 kg	EPO-MAX
95013813	10 kg	EPO-MAX

Qprep DUROPLAST BLACK

QPREP DUROPLAST BLACK is an electrically conductive hot mounting material. It is suitable for SEM examinations and electrolytic polishing.

PRODUCT ADVANTAGES

- Electroconductive
- Contains graphite particles
- Hardness (Shore D): 89
- Removal rate: Medium

RECOMMENDED APPLICATIONS

- Scanning electron microscopy
- Electrolytic polishing

Item No.	Unit	Description
		HOT MOUNTING MATERIAL DUROPLAST BLACK
95011993	1 kg	DUROPLAST BLACK
95011994	5 kg	DUROPLAST BLACK
95011995	10 kg	DUROPLAST BLACK

Qprep THERMOPLAST

QPREP THERMOPLAST is a highly transparent hot mounting material consisting of acrylic resin.

PRODUCT ADVANTAGES

- High transparency
- Suitable for filling up and marking
- Hardness (Shore D): 86
- Removal rate: Medium

RECOMMENDED APPLICATIONS

- Transparent mounting
- Ideal for target preparations and sensitive specimen
- Mounting of complex geometries and bulk solid materials

Item No.	Unit	Description
		HOT MOUNTING MATERIAL THERMOPLAST
95011996	1 kg	THERMOPLAST
95011997	5 kg	THERMOPLAST
95011998	10 kg	THERMOPLAST

Qprep BAKELIT BLACK

QPREP BAKELIT BLACK is an all-purpose hot mounting material. It is suitable for general materialographic applications.

PRODUCT ADVANTAGES

- Very convenient for filling in combination with other hot mounting material
- Contains wood flour and graphite
- Hardness (Shore D): 90
- Removal rate: Medium

RECOMMENDED APPLICATIONS

- Routine mountings
- Core structure examinations
- Mounting of soft to medium-hard materials

Item No.	Unit	Description
		HOT MOUNTING MATERIAL BAKELIT BLACK
95011981	1 kg	BAKELIT BLACK
95011982	5 kg	BAKELIT BLACK
95011983	10 kg	BAKELIT BLACK

Qprep BAKELIT GREEN

QPREP BAKELIT GREEN is an all-purpose hot mounting material. It is suitable for general materialographic applications.

PRODUCT ADVANTAGES

- Very convenient for filling in combination with other hot mounting material
- Suitable for color coding
- Contains wood flour
- Hardness (Shore D): 90
- Removal rate: Medium

RECOMMENDED APPLICATIONS

- Routine mountings
- Core structure examinations
- Mounting of soft to medium-hard materials

Item No.	Unit	Description
		HOT MOUNTING MATERIAL BAKELIT GREEN
95011987	1 kg	BAKELIT GREEN
95011988	5 kg	BAKELIT GREEN
95011989	10 kg	BAKELIT GREEN

Qprep BAKELIT RED

QPREP BAKELIT RED is an all-purpose hot mounting material. It is suitable for general materialographic applications.

PRODUCT ADVANTAGES

- Very convenient for filling in combination with other hot mounting material
- Suitable for color coding
- Contains wood flour
- Hardness (Shore D): 90
- Removal rate: Medium

RECOMMENDED APPLICATIONS

- Routine mountings
- Core structure examinations
- Mounting of soft to medium-hard materials

Item No.	Unit	Description
NEW FORMULA!		HOT MOUNTING MATERIAL BAKELIT RED
95011984	1 kg	BAKELIT RED
95011985	5 kg	BAKELIT RED
95011986	10 kg	BAKELIT RED

Notes

ATM Qness GmbH · Emil-Reinert-Str. 2 · 57636 Mammelzen · Germany · Phone: +49 2681 9539-0 · Fax: +49 2681 9539-20 · E-Mail: info@qatm.com · www.qatm.com
ATM Qness GmbH · Reitbauernweg 26 · 5440 Golling · Austria · Phone: +43 6244 34393 · Fax: +43 6244 34393 30 · E-Mail: info.at@qatm.com · www.qatm.com

Qprep Accessories & tools for hot mounting

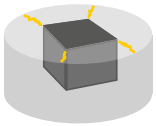
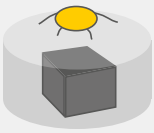
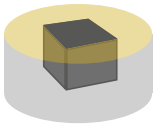
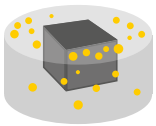
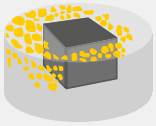
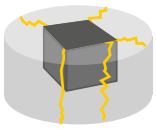
Depending on the shape of the specimen to be mounted, the chosen hot mounting material, and the objectives of the materialographic preparation QPREP's wide range of accessories and tools ensures the best possible analysis results.

- Anti-stick silicone paste and spray to protect the mould and ram surfaces
- Various clamps for aligning specimens with complex geometries
- Funnel for clean and loss-free filling of the mounting resin into the press mould.

Item No.	Unit	Description
		ACCESSORIES FOR HOT MOUNTING
92002660	90 ml	Silicon paste, anti-stick agent
92002661	200 ml	Silicon spray, anti-stick agent
92004441	1 Pc.	Brass brush for cleaning of hot mounting press
95017752	1 Pc.	Flat brush, size 20, for cleaning the hot mounting press
95017753	1 Pc.	Pointed angled tweezers, 160 mm, for positioning small samples
92002658	1 Pc.	Funnel for hot mounting material
92002715	1 Pc.	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

		CLIP FOR ALIGNING THIN SAMPLES IN MOULD
92002662	100 Pcs.	Steel
92002663	100 Pcs.	Plastic, transparent
92002707	100 Pcs.	Plastic, black
92002708	100 Pcs.	Plastic, red
92002709	100 Pcs.	Plastic, grey
		ACCESSORIES FOR HOT MOUNTING PRESSES
		• **for Hot Mounting Press Qpress 40**
95017793	10 Pcs.	Vacuum cleaner bags for Qpress 40 vacuum cleaner
95017797	1 Pcs.	HEPA fine dust filter for Qpress 40 vacuum cleaner
95016887	3 Pcs.	Descaling tablets
		• **for Hot Mounting Press Qpress 50**
95014506	1 Pcs.	Filter mat, 230 x 230 mm
95014507	1 Pcs.	Particle filter, 250 x 250 x 190 mm, seal on both sides
95016887	3 Pcs.	Descaling tablets

Qnote TIPS & TRICKS FOR HOT MOUNTING MATERIALS

Problem		Cause	Solution
EDGE CRACKS		Sharp-edged sample or sample mounted too close to the edge	Round off edges if possible, mount sample at least 3 mm from the edge For epoxy resins: Replace EPO-Max with EPO BLACK
BULGES/ BUBBLE FORMATION		Cooling time too short Cooling intensity too low Thermal decomposition of the mounting material (internal bubble formation)	Extend cooling time Increase cooling intensity Check cooling water supply Significantly lower target temperature
DULL SURFACE		Heating/curing time to short	Increase heating time
GAP BETWEEN SAMPLE AND MOUNTING MATERIAL		Incorrect mounting material Sample too big Sample not cleaned	Use mounting material with lower shrinkage/better adhesion If possible, separate the sample Increase the pressing pressure Clean and degrease the sample Clean the mould
POROSITY		Temperature to high Not enough mounting material Humidity in mounting material	Lower the heating temperature Increase the amount of mounting material Dry the mounting material at elevated temperatures
INDIVIDUAL GRAINS VISIBLE IN THE MOUNT *(THERMOSETS)*		Curing of the mounting material without (sufficient) pressure Curing before applying pressure	Increase the pressure during heating Shorten the pressureless heating phase
INTERNAL CRACKS *(THERMOPLAST)*		Heating time too short Cooling intensity too high	Extend the heating time Extend the cooling time Reduce the cooling intensity
„CLOUD FORMATION“ *(THERMOPLAST)*		Heating time too short Incomplete melting of the mounting material	Extend the heating time Extend the cooling time Refer to appropriate sample size

Cold mounting

The term cold mounting covers all mounting methods that do not require the use of a hot mounting press. To create an optimal cold-mounted specimen, consider the following:

- **The specimen must not be affected or corroded by the resin selected for cold mounting.**
- **The specimen must be able to withstand the peak temperature of the mounting system.**
- **To prevent gap formation, the specimen surface must be free of dust and grease before mounting, so that the specimen can be well wetted with the mounting medium.**

QPREP cold mounting resins are available with methyl methacrylate or MMA-free as well as epoxy based. Acrylate or MMA-free based cold mounting resins are characterized by good removal rate, short curing times and good chemical resistance. Epoxy resins are used for mounting of porous and temperature sensitive materials. Furthermore, they are used when the lowest possible gap formation is intended.

PROPERTIES OF COLD MOUNTING MATERIALS

Mounting material	Recommended mpplication	Basis	Curing time	Curing temperature	Hardness (Shore D)	Removal rate (grindability)
KEM 15 plus	With high edge retention, edge examination, medium-hard to hard materials	Methyl methacrylate	approx. 25 min.	approx. 85-100 °C	85	very low
KEM 20	Transparent mounting (pressure vessel), targeted preparation	Methyl methacrylate	approx. 15 min.	approx. 100-120 °C	84	medium
KEM 30	Semi-transparent mounting (pressure vessel), routine work, soft to medium-hard materials	Methyl methacrylate	approx. 5 min.	approx. 95-110 °C	85	medium
KEM 35	Minimized gap formation, edge examination, medium-hard to hard materials	Methyl methacrylate	approx. 12 min.	approx. 85-100 °C	87	very low
Qprep SEM 5000	SEM (Scanning electron microscopy), electrolytic polishing	Modified methyl methacrylate	approx. 10 min.	approx. 85-110 °C	91	very low
KEM 60	Universal usage	Tetrahydrofurfuryl-2-methacrylate	approx. 10 min.	approx. 95-110 °C	85	low
Qpox 90	Mounting using vacuum, sensitive and brittle materials	Epoxy resin	approx. 16-24 h	at room temperature up to approx. 50 °C	79	high
Qpox 92	Vacuum impregnation, brittle and heat sensitive materials, porous materials	Epoxy resin	approx. 12-13 h	at room temperature up to approx. 35 °C	81	medium
Qpox 94	Vacuum infiltration of porous and sensitive materials and surfaces, metal foams, ceramic substrates, samples with corrosion deposits	Epoxy resin	approx. 9 h (at room temperature), approx. 3 h (at 45 °C)	at room temperature up to 90-100 °C, in oven at 45 °C up to 140 °C	80	high

Qprep KEM 15 PLUS

QPREP KEM 15 PLUS is a universally applicable two-component cold mounting material based on a modified polyester resin. Due to its very low shrinkage, it is particularly suitable for boundary layer investigations.

PRODUCT ADVANTAGES

- Very low shrinkage
- High edge retention
- Good chemical resistance
- Good mechanical machinability
- Easy dosage with enclosed measuring spoon
- Curing temperature: approx. 85-100 °C
- Curing time: approx. 25 min
- Hardness (Shore D): 85
- Removal rate: Very low

RECOMMENDED APPLICATIONS

- Edge examination
- Mounting of medium-hard to hard materials
- Curing by means of overpressure with pressure equipment possible, to minimize porosity and increase edge retention

Item No.	Unit	Description
NEW FORMULA!		**COLD MOUNTING MATERIAL KEM 15 PLUS**
		Basis: Methyl methacrylate
		• **blue, opaque** • **2-component system: powder + liquid (1.5:1 [Vol.-%])**
95012019	1 Set	1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons: 13 ml and 20 ml
95011628	1 kg	Powder
95011629	500 ml	Liquid

Qprep KEM 20

QPREP KEM 20 is a universally applicable two-component cold mounting material based on a methyl methacrylate resin compound. Transparent mountings can be realized when curing under overpressure.

PRODUCT ADVANTAGES

- Feasibility of transparent mountings by means of pressure equipment
- Good chemical resistance
- Good mechanical machinability
- Easy dosage with enclosed measuring spoon
- Curing temperature: approx. 100-120°C
- Curing time: approx. 15 min
- Hardness (Shore D): 84
- Removal rate: Medium

RECOMMENDED APPLICATIONS

- Target preparations
- Mounting of soft to medium-hard materials

Item No.	Unit	Description
		COLD MOUNTING MATERIAL KEM 20
		Basis: Methyl methacrylate
		• **feasibility of transparent mountings by means of pressure unit** • **2-component system: powder + liquid (2:1 [Vol.-%])**
95013990	1 Set	1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons: 13 ml, oval
95013939	1 kg	Powder
95013940	5 kg	Powder
95013941	10 kg	Powder
95013942	500 ml	Liquid
95013943	1 l	Liquid

Qprep KEM 30

QPREP KEM 30 is a universal two-component cold mounting resin based on a methyl methacrylate resin compound. It is a fast-curing resin, which is particularly suitable for high sample throughput.

PRODUCT ADVANTAGES

- Semi-transparent
- Good chemical resistance
- Good mechanical machinability
- Easy dosage with enclosed measuring spoon

- Curing temperature: approx. 95-110°C
- Curing time: approx. 5 min
- Hardness (Shore D): 85
- Removal rate: Medium

RECOMMENDED APPLICATIONS

- Routine testing with high sample throughput
- Mounting of soft to medium-hard materials
- Curing by means of overpressure with pressure equipment possible, to minimize porosity

Item No.	Unit	Description
		COLD MOUNTING MATERIAL KEM 30
		Basis: Methyl methacrylate
		• **green, semi-transparent** • **2-component system: powder + liquid (2:1 [Vol.-%])**
95012021	1 Set	1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons: 13 ml, oval
92004080	1 kg	Powder
92004082	5 kg	Powder
92004081	500 ml	Liquid
92004083	1 l	Liquid
92002540	2.5 l	Liquid

Qprep KEM 35

QPREP KEM 35 is a universally applicable two-component cold mounting material based on a methyl methacrylate resin compound. Due to its very low shrinkage and hardness, it is particularly suitable for edge examination on materials with higher hardness.

PRODUCT ADVANTAGES

- Very low shrinkage
- High edge retention
- Very good mechanical machinability
- Easy dosage with enclosed measuring spoon

- Curing temperature: approx. 85-100°C
- Curing time: approx. 12 min
- Hardness (Shore D): 87
- Removal rate: Very low

RECOMMENDED APPLICATIONS

- Edge examination
- Mounting of hard materials
- Curing by means of overpressure with pressure equipment possible, to minimize porosity and increase edge retention

Item No.	Unit	Description
		COLD MOUNTING MATERIAL KEM 35
		Basis: Methyl methacrylate
		• **light green, opaque** • **2-component system: powder + liquid (1.5:1 [Vol.-%])**
95012022	1 Set	1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons: 13 ml and 20 ml
92002473	1 kg	Powder
92002474	5 kg	Powder
92002512	10 kg	Powder
92002475	500 ml	Liquid
92002476	1 l	Liquid
92002477	2.5 l	Liquid

Notes

Qprep SEM 5000

Qprep SEM 5000 is an electrically conductive cold mounting material based on a modified methyl methacrylate compound. It is suitable for SEM examinations and electrolytic polishing.

PRODUCT ADVANTAGES

- Electroconductive
- Contains copper particles
- Curing temperature: approx. 85-110 °C
- Curing time: approx. 10 min
- Hardness (Shore D): 91
- Removal rate: Very low

RECOMMENDED APPLICATIONS

- Scanning electron microscopy
- Electrolytic polishing

Item No.	Unit	Description
		COLD MOUNTING MATERIAL QPREP SEM 5000
		Basis: Modified methyl methacrylate
		• **copper-brown, free of blowholes by using a pressure device** • **2-component system: powder + liquid (20 g : 13 ml)**
95004058	1 kg	Powder
95004059	500 ml	Liquid

Qprep KEM 60

QPREP KEM 60 is a universally applicable, mineral-filled, MMA-free two-component cold mounting resin. It is characterized by short curing time and good mechanical machinability.

PRODUCT ADVANTAGES

- Free of MMA
- Good chemical resistance
- Good mechanical machinability
- Curing temperature: approx. 95-110°C
- Curing time: approx. 10 min
- Hardness (Shore D): 85
- Removal rate: Low

RECOMMENDED APPLICATIONS

- Routine mounting
- Very wide range of application
- Curing by means of overpressure with pressure equipment possible, to minimize porosity

Item No.	Unit	Description
		COLD MOUNTING MATERIAL KEM 60
		Basis: Tetrahydrofurfuryl-2-methacrylate
		• **red, MMA-free** • **2-component system: powder + liquid (2:0.9 [weight-%])**
95014004	1 Set	1 kg powder, 500 ml liquid, 40 mixing cups, 40 mixing sticks, 2 dosing spoons: 13 ml, oval
95013184	1 kg	Powder
95013185	5 kg	Powder
95013187	500 ml	Liquid

Qprep Qpox 90

QPREP Qpox 90 is a transparent two-component cold mounting material based on an epoxy resin. Due to its good flowability, it is well suited for the pre-potting of specimens with filigree and complex geometries.

Video: Mounting with epoxy resin

NEW NAME - SAME PERFORMANCE

PRODUCT ADVANTAGES

- Good transparency
- Very low gap formation
- Low viscosity
- Suitable for vacuum infiltration

- Curing temperature: RT to approx. 50°C
- Curing time: 16-24 h
- Hardness (Shore D): 79
- Removal rate: High

RECOMMENDED APPLICATIONS

- Routine mounting
- Applicable for a wide range of materials
- Target preparations
- Vacuum infiltration of porous material surface
- Pre-potting of assembled printed circuit boards to fix electronic components prior to cutting.
- Mounting of low hardness material

Item No.	Unit	Description
		COLD MOUNTING MATERIAL QPOX 90
		Basis: Epoxy resin
		• **transparent, suitable for vacuum infiltration** • **2-components-system: resin + hardener (2:1 [weight-%])**
95017315	1 Set	500 ml resin, 250 ml hardener 40 mixing cups, 40 mixing sticks
92002484	500 ml	Resin
92002485	250 ml	Hardener

Notes

Qprep Qpox 92

QPREP Qpox 92 is a highly transparent two-component cold mounting material on epoxy resin. It is very well suited for specimens with filigree and complex geometries. In addition, Qpox 92 is particularly recommended for mounting materials with temperature-sensitive surfaces and for target preparations.

PRODUCT ADVANTAGES

- Very good transparency
- Very low gap formation
- Low viscosity
- Suitable for vacuum infiltration

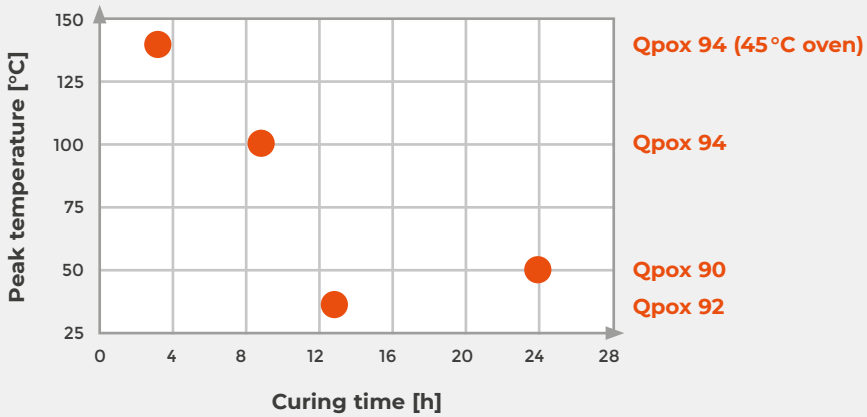
- Curing temperature: RT to approx. 35°C
- Curing time: 12-13 h (50% faster than Qpox 90)
- Hardness (Shore D): 81
- Removal rate: Medium

RECOMMENDED APPLICATIONS

- Routine mounting
- Applicable for a wide range of materials
- Target preparations of defects in coating surfaces
- Vacuum infiltration of porous material surface
- Pre-potting of assembled printed circuit boards to fix electronic components prior to cutting.
- Mounting of low hardness material

Item No.	Unit	Description
		COLD MOUNTING MATERIAL QPOX 92
		Basis: Epoxy resin
		• **transparent, suitable for vacuum infiltration** • **2-components-system: resin + hardener (4:1 [weight-%])**
95017316	1 Set	1 l resin, 250 ml hardener 40 mixing cups, 40 mixing sticks
95016854	1 l	Resin
95016855	250 ml	Hardener

Epoxy resins comparison chart



Qprep Qpox 94

QPREP Qpox 94 is a low-viscosity and transparent two-component epoxy-based cold mounting resin, ideal for samples with delicate and complex geometries. It is particularly suitable for sensitive and porous surfaces as well as target preparations. With a curing time of about 9 hours Qpox 94 allows transparent and gap-free mounting and preparation on the same day.

PRODUCT ADVANTAGES

- Excellent adhesion and very low gap formation
- Very good transparency
- Low-bubble mountings
- Low viscosity
- Suitable for vacuum infiltration

- Curing temperature: RT up to 45°C (T_{max} = 100°C to 140°C)
- Curing time: 9 h at RT (up to 65% faster than Qpox 90, 25% faster than Qpox 92), 3 h at 45°C
- Hardness (Shore D): 80
- Removal rate: High

RECOMMENDED APPLICATIONS

- Low-gap and transparent preparations on the same day
- Can be used for a wide range of materials
- For vacuum infiltration of porous materials and material surfaces, such as metal foams, porous ceramic support material or samples with corrosion layers
- Mountings and target preparations of assembled PCBs
- For filigree and sensitive specimens of more complex geometries and low-hardness workpieces

UP TO 65% FASTER THAN QPOX 90

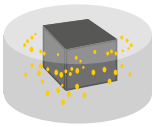
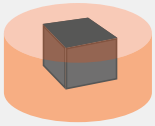
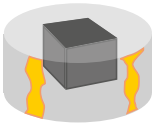
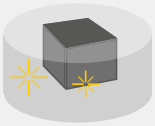
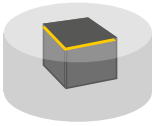
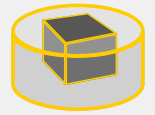
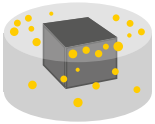
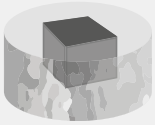
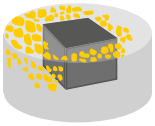
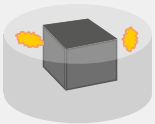
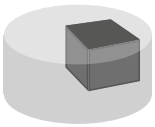
Item No.	Unit	Description
		COLD MOUNTING MATERIAL QPOX 94
		Basis: Epoxy resin
		• **transparent, suitable for vacuum infiltration** • **2-components-system: resin + hardener (2:1 [weight-%])**
95017538	1 Set	1 l resin, 500 ml hardener 40 mixing cups, 40 mixing sticks
95017496	1 l	Resin
95017497	500 ml	Hardener

Qnote

to Qpox 94: For optimal mounting results, an accurate mixing ratio is crucial (2:1 by weight). The pot life of approx. one hour favors the infiltration of porous materials. For optimal curing at RT, the sample can be covered with a mixing cup. The curing time can be reduced from 9-10 hours to around 2-3 hours (depending on the amount of epoxy resin used) by slight heating to approximately 45-50°C. It should be noted that heating results in an increase in peak temperature within the resin and a reduced pot life. Likewise, the final hardness can be increased by slight heating.

Notes

Qnote TIPS & TRICKS FOR COLD MOUNTING MATERIALS

Problem		Cause	Solution
BUBBLE FORMATION ALONG SAMPLE		Temperature too high during curing Insufficient degassing *(epoxy resin)* Surface tension Air stirred in	Active cooling/reduce amount of mounting material/ cure in layers Clean sample before mounting and degas epoxy resin under vacuum Move sample slighty after pouring the resin Stir mounting material without bubble incorporation
DISCOLORATION *(EPOXY RESIN)*		Temperature too high during curing Too much mounting material in relation to the sample	Active cooling/reduce amount of mounting material/ cure in layers
AIR INTAKE AT THE EDGE SURFACE *(EPOXY RESIN)*		Temperature too high Mounting mould not sealing tightly	Active cooling Use less mounting material Use thick-walled Qprep PTFE moulds
STICKY/RUBBERY SURFACE *(EPOXY RESIN)*		Curing temperature insufficient Curing time too short Too much hardener	Mount sample under heat Increase curing time/add “post curing” step Follow recommended ratio
GAP BETWEEN SAMPLE AND MOUNTING MATERIAL		Wrong mounting material Sample not cleaned Mounting material too hot during curing *(epoxy resin)*	Use mounting material with less shrinkage/better adhesion Separate sample if possible Clean and degrease sample thoroughly Active cooling/use less mounting material
STRONG SHRINKAGE		Peak temperature too high Insufficient degassing Insufficient mixing Too much mounting material Processing time („gel time“ / „pot life“) exceeded	Active cooling Sufficient evacuation/degassing in infiltration unit Ensure homogeneous mixture Pour less mounting material Prepare less mounting material/pour faster
POROSITY *(POLYESTER & METHACRYLATE)*		Bubble release during reaction Stirred-in bubbles	Cure under pressure (Qprep Pressure) Stir without bubbles *(epoxy resin >25 g, <150 g)*
GREASY SURFACE *(POLYESTER & METHACRYLATE)*		Insufficient mixing of powder and liquid Too much liquid	Stir for at least 30 seconds/stir in powder gradually/let swell for 10-15 seconds after stirring Follow recommended ratio
INHOMOGENEOUS MIXTURE *(POLYESTER & METHACRYLATE)*		Curing of mounting material without (sufficient) pressure Curing before applying pressure	Let mixture swell for 10-15 seconds after stirring, briefly stir again Replace powder component due to absorbed ambient moisture
HOLLOW REGIONS *(POLYESTER & METHACRYLATE)*		Pouring too quickly Air bubbles stirred in	Pour mounting material slowly over spatula onto the sample Pre-apply small amount of mounting material, place the sample on it, and pour the remaining mounting material Stir without bubbles
NO PLAN PARALLELISM AFTER GRINDING		Uneven distribution of load during preparation Sample not mounted centrally	Place sample centrally

COLD MOUNTING – TOOLS

The mounting process can be supported by different methods. The properties of the respective sample material and mounting material must be taken into account.

VACUUM PROCEDURES

- Mounting under reduced pressure is only possible with epoxy resins
- Requires a vacuum infiltration unit
- Method is used for the infiltration of porous sample material and for optimization with samples that have thin boreholes, fine pores, or microcracks.

PRESSURE PROCEDURES

- Applying pressure with cold mounting materials leads to gap-free mounting
- Pressure device with compressed air connection required
- Under pressure during curing, bubble formation is suppressed, and methacrylates cure transparently
- Epoxy resins can infiltrate samples even better after vacuum infiltration when pressure is applied

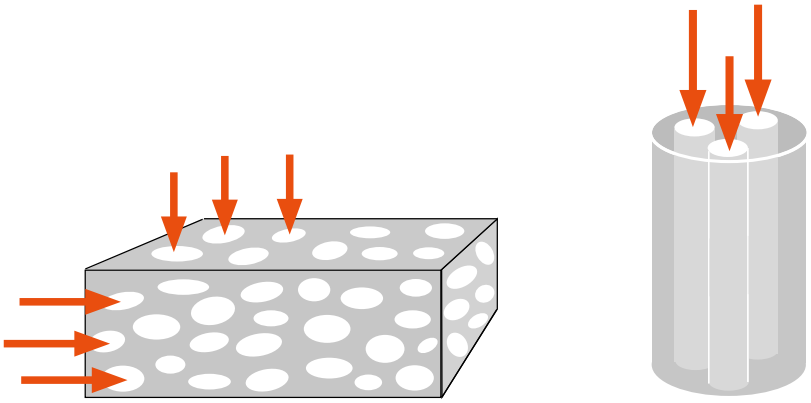


Diagram: Infiltration of porous material or thin boreholes

TIPS & TRICKS VACUUM INFILTRATION

Problem	Solution
Mounting material too brittle/soft	Control resin/hardener ratio
Severe bubble formation in the mounting material and on the surface	Vacuum too long and/or too high; recommendation: 0.6-0.8 bar, approx. 2-3 min
Infiltration incomplete	Evacuate longer

TIPS & TRICKS PRESSURE MOUNTING

Problem	Solution
Bad transparency	Too long mixing time Too late pressure increase Insufficient pressure Incorrect mixing ratio

Qnote

Caution: A vacuum set too high and applied for too long can affect polymerization, leading to uneven curing and thus varying results. The dosage of epoxy resins must be precisely adhered to and should therefore always be measured by weight percentage (e.g., using a laboratory scale).

Qprep Vacuum infiltration and pressure device

When cold mounting porous specimens it is purposeful to infiltrate them under vacuum, with a low viscosity mounting medium (epoxy resins). The QPREP infiltration device offers a solution for mounting under vacuum.

For transparent cold mounting using methyl methacrylate, these must be cured in a pressure device under positive pressure (2 - 2.5 bar). This increases the boiling point of the mounting material and suppresses the formation of gas bubbles during polymerization. The QPREP Pressure unit is best suited for this purpose.

PRODUCT ADVANTAGES

- Infiltration of porous materials
- Reinforcement of fragile materials
- Clear/transparent mounting possible with methyl methacrylate

RECOMMENDED APPLICATIONS

- Infiltration device for mounting porous samples with epoxy resin (Qpox 90 / 92 / 94)
- Pressure device for mounting with methyl methacrylate (KEM 15, 20, 30, 35, 60 and Qprep SEM 5000)

Item No.	Unit	Description
		INFILTRATION UNIT
		• **for cold mounting, pouring and hardening using vacuum** • **recommended for Epoxy resin Qpox 90 / 92 / 94**
M6500001	1 Pc.	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 EQUIPMENT QPREP PRESSURE
		Pressure Equipment Qprep Pressure for bubble free hardening of methyl methacrylates (for mounting with KEM 15, 20, 30, 35, 60 and Qprep SEM 5000) • **compressed air required (approx. 6 bar)**
95016569	1 Pc.	Pressure Equipment Qprep Pressure, dimensions: B340 x W340 x H255 mm

Notes

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UV mounting

A fast and safe alternative

UV mounting offers a modern solution for sample preparation and is particularly suitable for high sample throughput and routine applications with simple geometries. This method uses UV light to cure special methacrylates and offers numerous advantages over traditional methods.

What is UV mounting?

UV mounting is based on the irradiation of a UV-reactive and one-component mounting medium with UV light (365 nm), enabling fast and controlled curing. Within 60 seconds, the sample is ready for use without pressure or high temperatures.

Vorteile des UV-Einbettens

1. **No mixing errors and lower emissions:** Single-component, solvent-free systems eliminate mixing errors and reduce harmful emissions.
2. **Fast curing:** Only 60 seconds compared to 10-20 minutes with traditional systems.
3. **Lower heat load:** UV mounting methods reach lower temperatures and are ideal for sensitive samples.
4. **High quality and reproducibility:** Bubble-free, transparent samples without a pressure pot.
5. **Safety and efficiency:** Modern LED technology and fume extraction make the method safe and easy to use.

Areas of application

UV mounting is particularly suitable for metallic samples, functional ceramics, and soft to medium-hard materials with simple geometries, where no artifact formation due to heat or pressure should occur.

PROPERTIES OF UV MOUNTING MATERIALS

Mounting Material	Recommended Application	Basis	Curing time	Curing temperature	Hardness (Shore D)	Removal rate (grindability)
Qprep UV 50	For standard samples, soft to medium hard materials, targeted preparation	Modified methacrylate	approx. 60 s	approx. 90 °C	83	high
Qprep UV 55	Mounting with lower gap formation of standard samples, soft to medium-hard materials, specimen preparation and surface inspection	Modified methacrylate	8- 10 minutes	approx. 95 °C	83	high

Qprep UV 50

QPREP UV 50 is a light-curing, acrylic resin-based cold mounting material. It is ideally suited for target preparations and is usually used for routine specimens as well as soft to medium-hard materials with simple geometries. Curing is taken place by using the UV mounting device Qmount, which allows curing of the samples within 60 seconds using UV radiation of a very narrowly tolerated wavelength range (emission maximum at lamda = 365 nm).

PRODUCT ADVANTAGES

- Clear, colorless liquid with honey-like viscosity
- Very good transparency
- Curing by means of UV-Light
- No mixing necessary as it is a one-component system

- Curing temperature: approx. 90°C
- Curing time: 60s
- Hardness (Shore D): 83
- Removal rate: High

RECOMMENDED APPLICATIONS

- Routine mounting
- Target preparations
- Fixation of small components

Item No.	Unit	Description
		UV MOUNTING MATERIAL QRPEP UV 50
		Basis: Modified methacrylate
		• **transparent** • **1-component system**
95016840	1 l	All-in-one liquid

Qnote

Always use UV-transparent moulds based on PP or our Qprep Qmould Clear to ensure optimal curing of the samples. Clean the cured samples in an ethanol bath to achieve the highest possible surface quality and remove the sticky residues of the release agent. However, avoid unnecessary long exposure to ethanol. Mount large samples or samples intended for longitudinal sectioning in multiple layers, if necessary. Layer-by-layer pouring of the mounting medium is possible and reduces heat input.

Notes

Qprep UV 55

QPREP UV 55 is a low-viscosity and light-curing, acrylic-based UV mounting resin. It is ideal for transparent routine mounting of soft to medium-hard materials. Curing is carried out with UV irradiation in the Qmount UV mounting device within 10 minutes. The special composition enables mountings with reduced gaps, which enables preparation of coated and surface-treated materials.

PRODUCT ADVANTAGES

- Clear, colorless and low viscosity for improved flow
- Very good transparency
- Reduced gap formation (up to 70% less than QPREP UV 50)
- Good abrasion resistance and mechanical machinability
- 1-component-system
- No dangerous good

- Curing temperature: ~95°C
- Curing time: 8 - 10 min
- Hardness (Shore D): 83
- Removal rate: High

RECOMMENDED APPLICATIONS

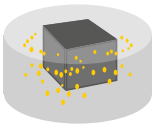
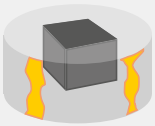
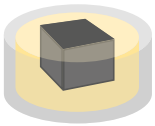
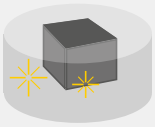
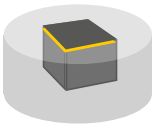
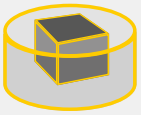
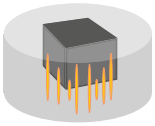
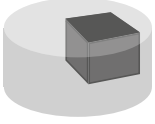
- Highly transparent for targeted preparations
- Preparation of surface-coated materials with low to medium hardness
- Gap-free UV mountings of, e.g., weld seams for routine inspection
- For the examination of fine components, such as coated copper wires
- Materialographic samples of histological materials, such as bones and teeth

Item No.	Unit	Description
UP TO 70% REDUCED GAP FORMATION COMPARED TO QPREP UV 50		**UV MOUNTING MATERIAL QPREP UV 55**
		Basis: Modified methacrylate
		• **transparent** • **1-component system**
95017495	1 l	All-in-one liquid

Qnote

to QPREP UV 55: The peak temperature reached during curing can be reduced for temperature-sensitive samples by using slightly cooled resin or layer-by-layer pouring and curing. Curing time and peak temperature may vary depending on sample size and may be lower for smaller mounting moulds. Rough and porous surfaces infiltrated via vacuum assistance due to the low viscosity of QPREP UV 55. This allows for better adhesion. QPREP UV 55 is ideal for water-based preparations and is resistant to alcohol and acids, but exposure to alcohol should be kept to a minimum.

Qnote TIPS & TRICKS FOR UV MOUNTING MATERIALS

Problem		Cause	Solution
AIR BUBBLES ALONG THE SAMPLE		Trapped air bubbles rise Surface tension Stirred air	Active cooling/reducing amount of mounting resin/ curing in layers Clean sample before mounting and degas epoxy resin under vacuum Moving the sample after pouring Mix the mounting resin without bubbles
LIQUID/GELLED AREAS AT THE EDGE		Insufficient curing in the outer area	Reduce distance from the edge in Qmount Use Qprep PP or Qmould Clear moulds
INSUFFICIENT CURING		Use of unsuitable moulds Shading by sample UV intensity too inhomogeneous	Use QPREP PP or Qmould Clear moulds Longer exposure time Cure in layers Use lower sample height
STICKY/RUBBERY SURFACE		If still present after ethanol cleaning: Insufficient irradiation time Swelling due to prolonged ethanol exposure & insufficient curing	Increase exposure time Minimize ethanol exposure For areas not accessible to UV and shading: Use Qprep cold mounting materials
EXCESSIVE GAP FORMATION		UV resin shrinks excessively Sample not cleaned Mounting material too hot during curing	Use mounting material with less shrinkage *(UV 50 -> UV 55)* Separate sample if possible Avoid hollow radii Clean and degrease sample Use less mounting material per irradiation cycle
STRONG SHRINKAGE		Peak-Temperature to high To much mounting resin	Evacuate/degas in infiltration unit Use less mounting material per irradiation cycle
RISING STREAKS IN THE CENTER OF THE SAMPLE *(QPREP UV 50)*		Irradiation intensity to high	Vary irradiation position (on/between LEDs) Use less mounting resin per irradiation cycle
BUBBLES NEAR THE SAMPLE/BACK OF THE MOUNT *(QPREP UV 55)*		Irradiation intensity to high incorporated air bubbles	Vary irradiation position (on/between LEDs) Pre-apply a small amount of mounting material, place the sample on the resin, and pour the remaining mounting material Stir without bubbles
NO PLAN PARALLELISM AFTER GRINDING		Uneven distribution of load during preparation Sample not mounted centrally	Place sample centrally

Qprep Accessories & tools for cold and UV mounting

The mixing of the different resin components as well as the exact positioning of your specimens influence the quality of your mounting. Therefore, QPREP supports with a wide range of tools and accessories for cold mounting. Mixing of the resin components, fixing and correct positioning of the samples in the cold mounting moulds can thus be realized reliably and safely.

ACCESSORIES

- Mixing beakers and spatulas
- Mounting utilities
- Dosing spoons
- Steel- and plastic clips

Item No.	Unit	Description
		ACCESSORIES
92001715	100 Pcs.	Mixing cups, disposable, 180 ml
92004360	1 Pc.	Silicon mixing cup, reusable
92001717	100 Pcs.	Mixing sticks (wood)
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
		CLIP FOR ALIGNING THIN SAMPLES IN MOULD
92002662	100 Pcs.	Steel
92002663	100 Pcs.	Plastic, transparent
92002707	100 Pcs.	Plastic, black
92002708	100 Pcs.	Plastic, red
92002709	100 Pcs.	Plastic, grey
		PLASTIC MOUNTING AID
92002623	100 Pcs.	Ø 30 mm, for 4 samples, sample thickness <1 mm, blue
92002625	100 Pcs.	Ø 30 mm, for 4 samples, sample thickness <2 mm, grey
92002624	100 Pcs.	Ø 30 mm, for 3 samples, sample thickness <3 mm, white
		TRANSPARENT MOUNTING AID
95016787	10 Pcs.	Ø 35 mm, for 4 samples, sample thickness <1 mm
95016788	50 Pcs.	Ø 35 mm, for 4 samples, sample thickness <1 mm
95016789	100 Pcs.	Ø 35 mm, for 4 samples, sample thickness <1 mm
95016790	10 Pcs.	Ø 35 mm, for 4 samples, sample thickness 1-2 mm
95016791	50 Pcs.	Ø 35 mm, for 4 samples, sample thickness 1-2 mm
95016792	100 Pcs.	Ø 35 mm, for 4 samples, sample thickness 1-2 mm
95016793	10 Pcs.	Ø 35 mm, for 3 samples, sample thickness 2-3 mm
95016794	50 Pcs.	Ø 35 mm, for 3 samples, sample thickness 2-3 mm
95016795	100 Pcs.	Ø 35 mm, for 3 samples, sample thickness 2-3 mm
95016796	10 Pcs.	Ø 35 mm, for 2 samples, sample thickness 3-4 mm
95016797	50 Pcs.	Ø 35 mm, for 2 samples, sample thickness 3-4 mm
95016798	100 Pcs.	Ø 35 mm, for 2 samples, sample thickness 3-4 mm

Qprep Cold and UV mounting moulds

Choosing a cold mounting mould of the correct size and suitable material the result of the mounting can be optimized. QPREP offers a variety of reusable and chemically resistant moulds of different sizes, and materials for this purpose.

Video: Qprep mounting moulds

Qmould Grey, round, without chamfer
- Two-piece design with practical handles and flexible material for easy removal and demoulding
- Compatible with epoxy resins, ideal for low-shrinkage resins like Qpox; alternative to silicone moulds

Qmould Clear, round, without chamfer
- High UV transparency for optimal curing of Qprep UV resins, suitable for UV and acrylic resins
- Handles facilitate sample placement; direct alternative to PP mounting moulds

Qmould White, round, without chamfer
- Durable design with resilient material and handles, ideal for high heat
- Cost-effective alternative to Teflon mounting moulds, suitable for polyester and acrylic resins

PTFE, beveled edge, round
- Very long service life and shape stability
- High strength, for particularly flat mountings

Silicone rubber, round or rectangular, beveled edge
- Flexibility of the material enables easy demoulding after curing
- Thick-walled mould, therefore, not recommended for light curing
- Without removable base

Polypropylene, round, without chamfer
- Semi-transparent, therefore suitable for light curing
- With removable base for easy demoulding after curing

Polyethylene, round, without chamfer
- Opaque, therefore, not recommended for light curing
- With removable base for easy demoulding after curing

Item No.	Unit	Description
		COLD AND UV MOUNTING MOULDS
		Qmould Grey, round, without chamfer • **not suitable for UV mounting** • **with exchangeable bottom**
95017577	5 Pcs.	Ø 40 mm / H 25 mm
95017578	5 Pcs.	Ø 50 mm / H 25 mm
		Qmould Clear, round, without chamfer • **suitable for UV mounting** • **with exchangeable bottom**
95017575	5 Pcs.	Ø 40 mm / H 25 mm
95017576	5 Pcs.	Ø 50 mm / H 25 mm

Item No.	Unit	Description
		COLD AND UV MOUNTING MOULDS
		Qmould White, round, without chamfer
		• **not suitable for UV mounting** • **with exchangeable bottom**
95017579	5 Pcs.	Ø 40 mm / H 25 mm
95017580	5 Pcs.	Ø 50 mm / H 25 mm
		PTFE round, beveled edge
		• **not suitable for light curing** • **with exchangeable bottom**
95017041	3 Pcs.	Ø 25 mm / H 23 mm
95017042	3 Pcs.	Ø 30 mm / H 25 mm
95017043	3 Pcs.	Ø 32 mm / H 25 mm
95017044	3 Pcs.	Ø 38 mm / H 25 mm
95017045	3 Pcs.	Ø 40 mm / H 30 mm
95017046	3 Pcs.	Ø 50 mm / H 30 mm
95017047	3 Pcs.	Ø 70 mm / H 30 mm
		Silicon rubber round, beveled edge
		• **not suitable for light curing**
95017026	5 Pcs.	Ø 25 mm / H 23 mm
95017027	5 Pcs.	Ø 30 mm / H 25 mm
95017028	5 Pcs.	Ø 32 mm / H 25 mm
95017029	5 Pcs.	Ø 38 mm / H 25 mm
95017030	5 Pcs.	Ø 40 mm / H 30 mm
95017031	5 Pcs.	Ø 50 mm / H 30 mm
		Silicon rubber square, beveled edge
		• **not suitable for light curing**
92002509	1 Pc.	55 x 30 mm / H 22 mm
95017032	5 Pcs.	55 x 30 mm / H 22 mm
92002510	1 Pc.	70 x 40 mm / H 22 mm
95017033	5 Pcs.	70 x 40 mm / H 22 mm
		Polypropylene round, without chamfer
		• **suitable for light curing** • **with exchangeable bottom**
95017317	5 Pcs.	Ø 25 mm / H 27 mm
95017318	5 Pcs.	Ø 30 mm / H 27 mm
95017319	5 Pcs.	Ø 40 mm / H 27 mm. Will be replaced by Qmould Clear 95017575
		Polyethylene round, without chamfer
		• **not suitable for light curing** • **with exchangeable bottom**
95017037	5 Pcs.	Ø 25 mm / H 25 mm
95017038	5 Pcs.	Ø 30 mm / H 25 mm
95017039	5 Pcs.	Ø 40 mm / H 25 mm. Will be replaced by Qmould White 95017579
95017040	5 Pcs.	Ø 50 mm / H 25 mm. Will be replaced by Qmould White 95017580

RECOMMENDED APPLICATION

Mounting material	Qmould Grey	Qmould Clear	Qmould White	PTFE mould round	Silicon mould round	Silicon mould square	PP mould round	PE mould round
KEM 15 plus	⊖	⊖	⊕⊕	⊙	⊖	⊖	⊖	⊕
KEM 20	⊖	⊕	⊕⊕	⊕	⊙	⊖	⊕	⊕⊕
KEM 30	⊕	⊕	⊕⊕	⊕	⊕	⊕	⊕	⊕⊕
KEM 35	⊕	⊕	⊕⊕	⊕⊕	⊕	⊕	⊕	⊕⊕
Qprep SEM 5000	⊕	⊕	⊕⊕	⊕⊕	⊕	⊙	⊕	⊕⊕
KEM 60	⊕	⊕	⊕⊕	⊕⊕	⊕	⊙	⊕	⊕⊕
Qpox 90	⊕⊕	⊙	⊙	⊙	⊖	⊖	⊙	⊙
Qpox 92	⊕⊕	⊙	⊙	⊙	⊖	⊖	⊙	⊙
Qpox 94	⊕⊕	⊙	⊙	⊙	⊖	⊖	⊙	⊙
Qprep UV 50	⊖	⊕⊕	⊖	⊖	⊖	⊖	⊕⊕	⊖
Qprep UV 55	⊖	⊕⊕	⊖	⊖	⊖	⊖	⊕⊕	⊖

⊕⊕ = very well suited, ⊕ = well suited, ⊙ = limited suitable, ⊖ = not suitable

Notes

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MATERIALOGRAPHY & HARDNESS TESTING

Qprep

Solution Boxes

Qprep Solution Boxes

In addition to the necessary specialist knowledge, the correct selection of the media suitable for the sample material is essential for a successful preparation. For a secure start close to the application, the QATM solution boxes contain all the grinding and polishing media required for the preparation of a specific material. If the preparation recommendations described are observed, this enables an optimal result.

11 different boxes for different materials are available for media in Ø250 mm and Ø300 mm.

QPREP SOLUTION BOXES INCLUDE:

- A guide for the preparation of the selected material.
- Consumables for grinding as well as polishing: Grinding disc, grinding paper, Diamond suspension and polishing cloth

PRODUCT ADVANTAGES

- Evaluated preparation guide
- Consumables for preparation available in sufficient quantity
- Simple instructions for laboratory workers

RECOMMENDED APPLICATIONS

- For unknown specimen preparation
- Ideally suited for new customers as an introduction

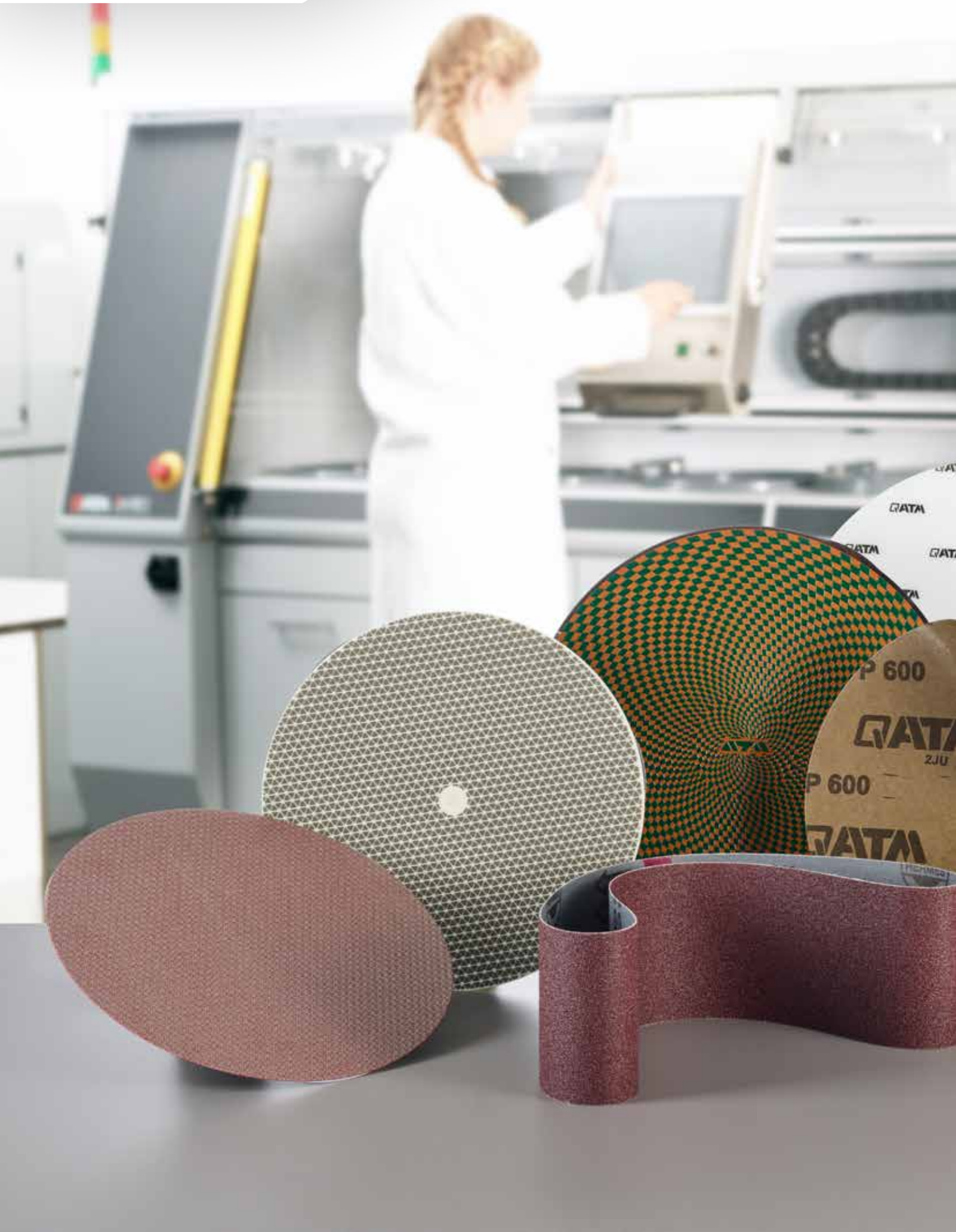
Item No.	Unit	Description
		SOLUTION BOXES
		Set of consumables including preparation guide for respective materials
		Aluminum alloys
95013883	1 Box	Solution Box Ø 250 mm
95013473	1 Box	Solution Box Ø 300 mm
		Composites (CFC/GFC)
95013894	1 Box	Solution Box Ø 250 mm
95013877	1 Box	Solution Box Ø 300 mm
		Cast iron (GJS/GJL)
95013898	1 Box	Solution Box Ø 250 mm
95013881	1 Box	Solution Box Ø 300 mm
		Soft to medium-hard steel
95013896	1 Box	Solution Box Ø 250 mm
95013879	1 Box	Solution Box Ø 300 mm
		Medium-hard to hard steel
95013884	1 Box	Solution Box Ø 250 mm
95013474	1 Box	Solution Box Ø 300 mm
		Steel and welded steel (macro)
95013893	1 Box	Solution Box Ø 250 mm
95013876	1 Box	Solution Box Ø 300 mm
		Nitrided steel
95013899	1 Box	Solution Box Ø 250 mm
95013882	1 Box	Solution Box Ø 300 mm

Item No.	Unit	Description
		SOLUTION BOXES
		Set of consumables including preparation guide for respective materials
		Circuit board (non assembled)
95013886	1 Box	Solution Box Ø 250 mm
95013869	1 Box	Solution Box Ø 300 mm
		Circuit board (assembled)
95013891	1 Box	Solution Box Ø 250 mm
95013874	1 Box	Solution Box Ø 300 mm
		Copper and copper alloys
95013885	1 Box	Solution Box Ø 250 mm
95013475	1 Box	Solution Box Ø 300 mm
		Titanium alloys
95013888	1 Box	Solution Box Ø 250 mm
95013871	1 Box	Solution Box Ø 300 mm

Notes

QATM®

MATERIALOGRAPHY & HARDNESS TESTING

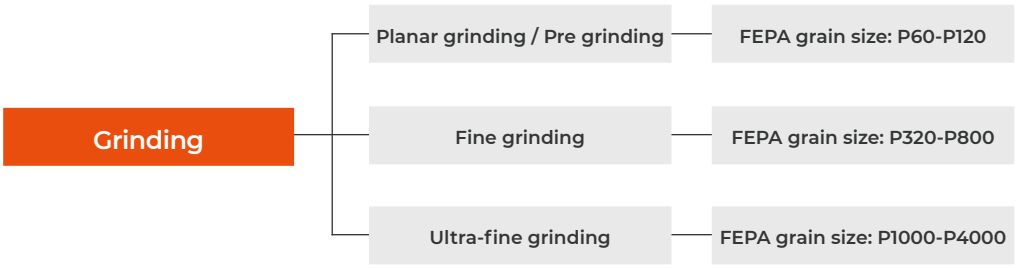


Qprep

Consumables for grinding

Grinding

Mechanical grinding is a machining process using bonded abrasive grains to level and smooth the specimen surface. This process is divided into three categories in materialography as follows:



Typically, silicon carbide (SiC), aluminum dioxide (Al_2O_3), silicon dioxide (SiO_2), zirconium dioxide (ZrO_2), diamond or cubic boron nitride (CBN) are used as abrasives. Particular attention must be paid here to low-deformation material removal and at the same time to keeping the number of preparation steps as low as possible. A wide range of QPREP grinding media is available for this purpose.

Qprep Planar grinding stones

If highest stock removal with highest planarity in the shortest time is required, the use of a planar grinding stone in materialographic specimen preparation is essential. In combination with our powerful automatic Qgrid XL planar grinding machine or our grinding and polishing automat Qpol 300 BOT, even high sample throughputs can be efficiently planar ground.

PRODUCT ADVANTAGES

- Short machining time
- Excellent planarity for all materials
- Optimized removal rates with Qgrind XL stock removal monitoring
- Ideal preparatory work for polishing on our Qpol polishing machine series

RECOMMENDED APPLICATIONS

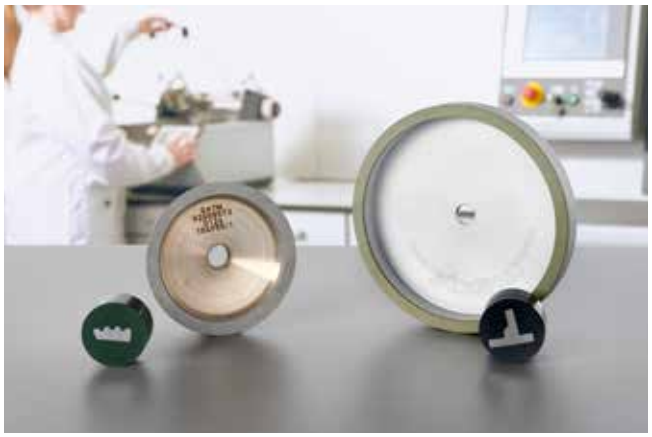
- Primary material control with high sample throughput
- Serial inspections

Item No.	Unit	Description			
		PLANAR GRINDING STONES FOR QGRIND XL			
		Grain Size FEPA standard	**Outer Ø**	**Inner Ø**	**Abor Size Ø**
		White corundum grinding stone **• for tool steel (hardened and not hardened), stainless steel, steel and cast iron**			
95016741	1 Pc.	100	356 mm	126 mm	38 mm
95017565	1 Pc.	150	356 mm	126 mm	38 mm
		SIC grinding stone **• for sintered materials (low- and unalloyed), aluminum, chilled cast iron, copper**			
95016746	1 Pc.	80	356 mm	126 mm	38 mm
95016747	1 Pc.	150	356 mm	126 mm	38 mm
		Multi point dressing diamond for dressing face grinding stones			
95016897	1 Pc.	Multi point dressing diamond			

Item No.	Unit	Description			
		PLANAR GRINDING STONES FOR SAPHIR 375 AND QPOL 300 BOT			
		Grain Size FEPA standard	**Outer Ø**	**Inner Ø**	**Abor Size Ø**
		White corundum grinding stone • **for tool steel (hardened and not hardened), stainless steel, steel and cast iron** • **glued on metal carrier plate**			
95000180	1 Pc.	100	350 mm	90 mm	40 mm
95000210	1 Pc.	150	350 mm	90 mm	40 mm
95002034	1 Pc.	180	350 mm	90 mm	40 mm
		SIC grinding stone • **for sintered materials (low- and unalloyed), aluminum, chilled cast iron, copper** • **glued on metal carrier plate**			
95002223	1 Pc.	80	350 mm	90 mm	40 mm
		Inner diameter 120 mm on request			
		Multi point dressing diamond for dressing face grinding stones			
92008759	1 Pc.	Multi point dressing diamond			

Qprep Diamond cup grinder

If a specimen with parallel faces is desired after precision cutting the use of a diamond cup wheel for further processing is recommended. Used in our precision cutting machines Qcut 150 M, Qcut 150 A and Qcut 200 A with vacuum specimen holder, the QPREP diamond cup grinder enable the user to achieve optimum planar parallelism with high surface quality and reproducibility.



PRODUCT ADVANTAGES

- Planar parallel sample preparation
- Stock removal with high accuracy
- High degree of reproducible accuracy

RECOMMENDED APPLICATIONS

- Target preparation
- Defect analysis
- Thin section technology
- Petrographic examinations

	Item No.	Unit	Description				
			DIAMOND CUP GRINDER				
			Ø	**Thickness**	**Height**	**Arbor Size**	**Grain Size**
			• **for glass fiber reinforced plastics and printed circuit boards** • **with galvanic bond**				
NEW	95017782	1 Pc.	150 mm	8 mm	21.7 mm	12.7 mm	D120
NEW	95017784	1 Pc.	150 mm	8 mm	21.7 mm	12.7 mm	D213
			• **for glass, ceramics, rocks, hard metal** • **with resin bond**				
	95017564	1 Pc.	150 mm	8 mm	21.5 mm	12.7 mm	D252
	95015123	1 Pc.	150 mm	8 mm	21.5 mm	12.7 mm	D151
	95017562	1 Pc.	150 mm	8 mm	21.5 mm	12.7 mm	D126
	95015122	1 Pc.	150 mm	8 mm	21.5 mm	12.7 mm	D64
	95017563	1 Pc.	150 mm	8 mm	21.5 mm	12.7 mm	D12

Grinding Discs

QPREP provides a comprehensive portfolio of grinding discs with different bond systems, grain types and grain sizes. This allows to find the best solutions for individual requirements. All abrasive elements are deposited on a metal carrier, so they can be directly applied on the QPREP magnetic foil without further tools. The grinding elements have only minimal resilience and ensure a planar surface with high edge retention. By this, it will gain stock removal free of smearing and chipping. QPREP grinding discs realize short preparation times while maintaining long life times. This contributes to a sustainable and resource-saving process in materialography.

PRODUCT ADVANTAGES

- High lifetime
- High planarity
- Sample preparation with high edge retention
- Sustainable and eco-friendly

Range of grinding and polishing systems

FEPA	P60	P80-100	P100-120	P180-320	P400-600	P800-1000	P5000	material hardness
GALAXY		GREY	RED	GREEN	BLUE	YELLOW		> 350 HV

Grain size (µm)	250	125	60	30	15	6	3	material hardness
POLARIS M			60	30	15	6	3	250 – 600 HV
POLARIS H		125	60	30	15	6	3	> 500 HV
QUASAR	250	125	91	46				> 500 HV
VEGA		125	75	54	25	10		universal

Removal rate*

- GALAXY
- POLARIS M
- POLARIS H
- QUASAR
- VEGA

Surface quality*

- GALAXY
- POLARIS M
- POLARIS H
- QUASAR
- VEGA

*with newly dressed / cleaned disc and same grit sizes

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FIXATION SYSTEM FOR GRINDING DISCS

Qprep Magnetic foil

For low resilience during grinding (or polishing) as well as best adhesion and easy handling of the QPREP GALAXY grinding discs (or polishing cloths), the QPREP magnetic foil is perfectly suited.

PRODUCT ADVANTAGES

- Low resilience
- One time application on the working disc of the machine
- Long service life
- Different magnet. field strengths

RECOMMENDED APPLICATIONS

- For the use of all GALAXY grinding discs and polishing cloths
- Frequent change of grinding discs and polishing cloths

Item No.	Unit	Description	
		MAGNETIC FOIL, SELF-ADHESIVE	
		Ø	**thickness**
		Magnetic foil, strong adhesion **• to apply on working wheel**	
95016345	1 Pc.	200 mm	1 mm
95016346	1 Pc.	250 mm	1 mm
95012161	1 Pc.	300 mm	1 mm
95014137	1 Pc.	350 mm	1 mm
		Magnetic foil, strongest adhesion **• to apply on working wheel** **• Increased magnetic adhesion by higher material thickness**	
95016300	1 Pc.	250 mm	2 mm
95016301	1 Pc.	300 mm	2 mm

Applying the magnetic foil

Placing e.g. a diamond grinding disc on the magnetic foil

Qprep GALAXY diamond grinding disc

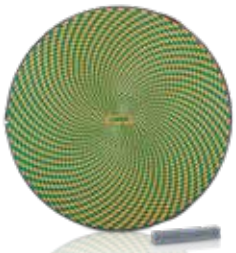
QPREP GALAXY diamond grinding discs are equipped with specially arranged elements, which contain resin-bonded diamond grains, on a stainless-steel metal carrier. They are used for planar and fine grinding of medium-hard and hard materials. The color-coded grinding discs cover the FEPA grain sizes P80 to P1000. The color coding for the individual grain size ranges can be found in the application table.

PRODUCT ADVANTAGES

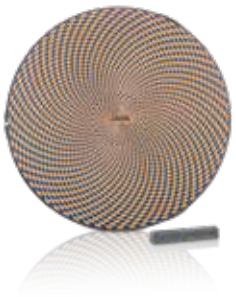
- High stock removal
- Short processing times
- High planarity

RECOMMENDED APPLICATIONS

- Steel with medium and high hardness
- Cast iron (CJS / CJL)
- Composites
- Hard metal
- Glass



Item No.	Unit	Description	
		GALAXY DIAMOND GRINDING DISCS BOND: RESIN	
		Description	**Ø**
		for medium to hard materials • **planar grinding: grey (P80 – P100)** • **Fixation system: Magnetic foil**	
95005505	1 Pc.	GALAXY diamond grinding disc grey	200 mm
95004279	1 Pc.	GALAXY diamond grinding disc grey	250 mm
95004280	1 Pc.	GALAXY diamond grinding disc grey	300 mm
95013917	1 Pc.	GALAXY diamond grinding disc grey	350 mm
		incl. dressing stone No. 95006603	
		for medium to hard materials • **planar grinding: red (P100 – P120)** • **Fixation system: Magnetic foil**	
95005521	1 Pc.	GALAXY diamond grinding disc red	200 mm
95004310	1 Pc.	GALAXY diamond grinding disc red	250 mm
95004314	1 Pc.	GALAXY diamond grinding disc red	300 mm
95013918	1 Pc.	GALAXY diamond grinding disc red	350 mm
		incl. dressing stone No. 95006603	
		for medium to hard materials • **fine grinding: green (P180 – P320)** • **Fixation system: Magnetic foil**	
95005522	1 Pc.	GALAXY diamond grinding disc green	200 mm
95004311	1 Pc.	GALAXY diamond grinding disc green	250 mm
95004315	1 Pc.	GALAXY diamond grinding disc green	300 mm
95013919	1 Pc.	GALAXY diamond grinding disc green	350 mm
		incl. dressing stone No. 95006603	



Item No.	Unit	Description	
		GALAXY DIAMOND GRINDING DISCS BOND: RESIN	
		Description	**ø**
		for medium to hard materials • **fine grinding: blue (P400 – P600)** • **Fixation system: Magnetic foil**	
95005523	1 Pc.	GALAXY diamond grinding disc blue	200 mm
95004312	1 Pc.	GALAXY diamond grinding disc blue	250 mm
95004316	1 Pc.	GALAXY diamond grinding disc blue	300 mm
95013920	1 Pc.	GALAXY diamond grinding disc blue	350 mm
		incl. dressing stone No. 95006603	
		for medium to hard materials • **fine grinding: yellow (P800 – P1000)** • **Fixation system: Magnetic foil**	
95005524	1 Pc.	GALAXY diamond grinding disc yellow	200 mm
95004313	1 Pc.	GALAXY diamond grinding disc yellow	250 mm
95004317	1 Pc.	GALAXY diamond grinding disc yellow	300 mm
95013921	1 Pc.	GALAXY diamond grinding disc yellow	350 mm
		incl. dressing stone No. 95006603	

Grid to grain size conversion chart

The values provided are only intended as guidelines. Grit sizes are considered as a range, rather than a specific value. The Federation of European Producers of Abrasives, known as FEPA, and the American National Standards Institute, known as ANSI, as well as the Japanese Industrial Standards Committee (JISC) are the respective organizations, that define these standards and are the basis for the conversion. QPREP abrasive paper conforms to the European FEPA P standard.

Grain size [µm]	201	125	82	60	46	30	22	15	8	5
FEPA P (Europe)	P80	P120	P180	P240	P320	P500	P800	P1.200	P2.500	P4.000
ANSI/CAMI (USA)	#80	#100	#150	#220	#280	#360	#400	#600	#1.000	#1.200
JIS (Japan)	~J60	J100	J150	J320	J360	J600	J700	J1.000	J2.000	J3.000

Qprep POLARIS M diamond grinding disc

QPREP Polaris M is a grinding disc on a zinc-plated metal carrier for pre- and fine grinding of medium-hard materials. The backside of the product is coated with a high-quality non-slip print. The grinding disc is equipped with diamonds bonded in medium-hard synthetic resin. The functional back print provides secure adhesion to the magnetic foil.

PRODUCT ADVANTAGES

- High stock removal
- Particularly high planarity with high surface quality
- Long lifetime

RECOMMENDED APPLICATIONS

- Metal materials of medium hardness < 500 HV
- Polymer materials
- Composites
- Ceramics

Item No.	Unit	Description	
		POLARIS M DIAMOND GRINDING DISCS	
		Description	**Grain Size**
		for medium-hard materials • **incl. cleaning stone No. (95015077)** • **Fixation system: Magnetic foil**	
		250 mm Ø	
95015016	1 Pc.	POLARIS M diamond grinding disc	60 µm
95015017	1 Pc.	POLARIS M diamond grinding disc	30 µm
95015018	1 Pc.	POLARIS M diamond grinding disc	15 µm
95015019	1 Pc.	POLARIS M diamond grinding disc	6 µm
95015020	1 Pc.	POLARIS M diamond grinding disc	3 µm
		300 mm Ø	
95015041	1 Pc.	POLARIS M diamond grinding disc	60 µm
95015042	1 Pc.	POLARIS M diamond grinding disc	30 µm
95015043	1 Pc.	POLARIS M diamond grinding disc	15 µm
95015044	1 Pc.	POLARIS M diamond grinding disc	6 µm
95015045	1 Pc.	POLARIS M diamond grinding disc	3 µm

Notes

Qprep POLARIS H diamond grinding disc

QPREP Polaris H is a grinding disc on a zinc-plated metal carrier for pre- and fine grinding of hard materials. The backside of the product is coated with a high-quality non-slip print. The grinding disc is equipped with diamonds bonded in hard synthetic resin. The functional back print provides secure adhesion to the magnetic foil.

PRODUCT ADVANTAGES

- High stock removal
- Particularly high planarity with high surface quality
- Long lifetime

RECOMMENDED APPLICATIONS

- Metal materials of higher hardness > 500HV
- Fiber reinforced plastics
- Composites
- Ceramics
- Rocks

Item No.	Unit	Description	
		POLARIS H DIAMOND GRINDING DISCS	
		Description	**Grain Size**
		for hard materials • **incl. cleaning stone No. (95015077)** • **Fixation system: Magnetic foil**	
		250 mm Ø	
95015010	1 Pc.	POLARIS H diamond grinding disc	125 µm
95015011	1 Pc.	POLARIS H diamond grinding disc	60 µm
95015012	1 Pc.	POLARIS H diamond grinding disc	30 µm
95015013	1 Pc.	POLARIS H diamond grinding disc	15 µm
95015014	1 Pc.	POLARIS H diamond grinding disc	6 µm
95015015	1 Pc.	POLARIS H diamond grinding disc	3 µm
		300 mm Ø	
95015035	1 Pc.	POLARIS H diamond grinding disc	125 µm
95015036	1 Pc.	POLARIS H diamond grinding disc	60 µm
95015037	1 Pc.	POLARIS H diamond grinding disc	30 µm
95015038	1 Pc.	POLARIS H diamond grinding disc	15 µm
95015039	1 Pc.	POLARIS H diamond grinding disc	6 µm
95015040	1 Pc.	POLARIS H diamond grinding disc	3 µm

Notes

QUASAR diamond grinding disc

QPREP Quasar is a grinding disc on a zinc-plated metal carrier for planar- and pre grinding of hard materials. The back of the product is coated with a high-quality non-slip print. The grinding disc is equipped with diamonds bonded in hard epoxy resin. The functional back print provides secure adhesion to the magnetic foil.

PRODUCT ADVANTAGES

- High stock removal
- Particularly high planarity with high surface quality
- Very long lifetime

RECOMMENDED APPLICATIONS

- Hard ferrous materials
- Nickel base-super alloys
- Hard metals
- Ceramics

Item No.	Unit	Description	
		QUASAR DIAMOND GRINDING DISCS	
		Description	**Grain Size**
		for hard materials • **incl. dressing stone No. (95015076)** • **Fixation system: Magnetic foil**	
		250 mm Ø	
95015006	1 Pc.	QUASAR diamond grinding disc	252 µm
95015007	1 Pc.	QUASAR diamond grinding disc	125 µm
95015008	1 Pc.	QUASAR diamond grinding disc	91 µm
95015009	1 Pc.	QUASAR diamond grinding disc	46 µm
		300 mm Ø	
95015031	1 Pc.	QUASAR diamond grinding disc	252 µm
95015032	1 Pc.	QUASAR diamond grinding disc	125 µm
95015033	1 Pc.	QUASAR diamond grinding disc	91 µm
95015034	1 Pc.	QUASAR diamond grinding disc	46 µm

Notes

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Qprep VEGA diamond grinding disc

QPREP Vega is a grinding disc on a zinc-plated metal carrier for planar and pre-grinding of hard materials. On the back side the product is coated with a high-quality non-slip print. The grinding disc is equipped with diamonds bonded in nickel. The functional back print provides secure adhesion to the magnetic foil.

PRODUCT ADVANTAGES

- High stock removal
- Particularly high planarity
- Very long lifetime

RECOMMENDED APPLICATIONS

- Hard ferrous materials
- Composites
- Ceramics
- Rocks
- Possible to grind unmounted samples
- Especially recommended for manual preparations

Item No.	Unit	Description	
		VEGA DIAMOND GRINDING DISCS	
		Description	**Grain Size**
		for hard materials, for planar and pre-grinding • **Fixation system: Magnetic foil**	
		200 mm Ø	
95015001	1 Pc.	VEGA diamond grinding disc	125 µm
95015002	1 Pc.	VEGA diamond grinding disc	75 µm
95015003	1 Pc.	VEGA diamond grinding disc	54 µm
95015004	1 Pc.	VEGA diamond grinding disc	25 µm
95015005	1 Pc.	VEGA diamond grinding disc	10 µm
		250 mm Ø	
95015026	1 Pc.	VEGA diamond grinding disc	125 µm
95015027	1 Pc.	VEGA diamond grinding disc	75 µm
95015028	1 Pc.	VEGA diamond grinding disc	54 µm
95015029	1 Pc.	VEGA diamond grinding disc	25 µm
95015030	1 Pc.	VEGA diamond grinding disc	10 µm
		300 mm Ø	
95015051	1 Pc.	VEGA diamond grinding disc	125 µm
95015052	1 Pc.	VEGA diamond grinding disc	75 µm
95015053	1 Pc.	VEGA diamond grinding disc	54 µm
95015054	1 Pc.	VEGA diamond grinding disc	25 µm
95015055	1 Pc.	VEGA diamond grinding disc	10 µm
		350 mm Ø	
95016235	1 Pc.	VEGA diamond grinding disc	125 µm
95016236	1 Pc.	VEGA diamond grinding disc	75 µm
95016237	1 Pc.	VEGA diamond grinding disc	54 µm
95016238	1 Pc.	VEGA diamond grinding disc	25 µm
95016239	1 Pc.	VEGA diamond grinding disc	10 µm

Qprep CONTERO fine grinding discs

QPREP Contero S and H are a general purpose fine grinding discs with a specially arranged inflexible grinding surface. The grinding elements consist of a reinforced composite matrix and are mounted on a stainless metal carrier. During the fine grinding process, diamond suspension is regularly fed to the disc, in this way the diamonds partially are implant in the functional surface. This leads to high stock removal rates and creates very low-deformation sample surfaces, which can be polished easily and efficiently afterwards.

CONTERO S:
PRODUCT ADVANTAGES
- High stock removal rate and flatness
- Long lifetime
- High edge retention
- Compatible with diamond suspensions from 6 to 15 µm grain size

RECOMMENDED APPLICATIONS
- Ideal for soft to medium-hard materials with a hardness of < 300 HV
- Composites with soft matrix
- Edge examinations
- Characterization of layer systems
- High sample throughput

CONTERO H:
PRODUCT ADVANTAGES
- Maintenance-free and ready to use out of the box
- High surface quality and homogeneous scratch pattern
- High stock removal rate, flatness and edge retention
- Long lifetime
- Compatible with diamond suspensions from 6 to 15 µm grain size

RECOMMENDED APPLICATIONS
- Ideal for medium-hard to hard materials with a hardness of 300 HV or more
- Edge examinations
- Characterization of hard coatings
- Sintered Carbides
- Cermets (ceramic composite with metal matrix)
- High sample throughput

	Item No.	Unit	Description	Ø
			CONTERO S FINE GRINDING DISCS	
			Description	**Ø**
			for soft to medium-hard materials **• Fixation system: Magnetic foil**	
	95013194	1 Pc.	Contero S fine grinding disc	250 mm
	95013196	1 Pc.	Contero S fine grinding disc	300 mm

	Item No.	Unit	Description	Ø
			CONTERO H FINE GRINDING DISCS	
			Description	**Ø**
			for medium-hard to hard materials **• Fixation system: Magnetic foil**	
NEW	95017605	1 Pc.	Contero H fine grinding disc	250 mm
NEW	95017606	1 Pc.	Contero H fine grinding disc	300 mm

Item No.	Unit	Description
		CLEANING BRUSHES
		Description
		• for cleaning of grinding and fine grinding discs
95016623	1 Pc.	Nylon brush

Grinding papers and foils

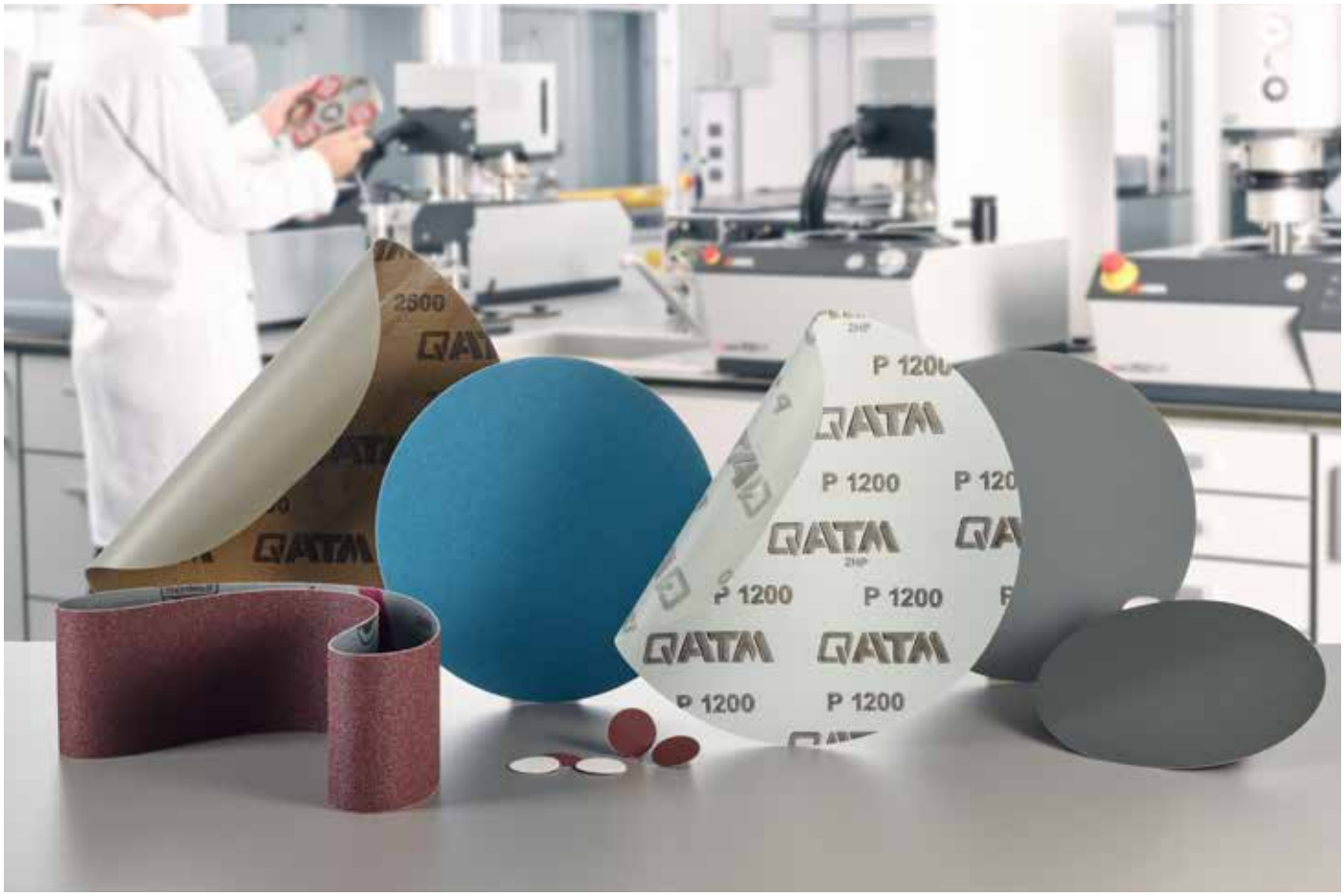
As an alternative to QPREP grinding discs, specimen preparation is also possible using QPREP grinding papers and foils. These differ in the type of carrier material and the possibility of the fixation systems to be used (double-sided adhesive carrier, GALAXY X-Tap, GALAXY Quick-Tap).

Grinding papers:

- Foiled back, carrier material paper
- Self-adhesive back, carrier material paper
- Paper back, carrier material paper

Grinding foils:

- Back foil, carrier material foil



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FIXATION SYSTEM FOR GRINDING FOILS AND PAPERS WITH FOIL BACKING

Qprep Adhesive carrier disc

The QPREP adhesive carrier is characterized by a nano-surface, which ensured good adhesion and easy removal of the grinding medium. **Alternative fastening systems:** The GALAXY Quick-Tap is compatible with grinding paper with and without foiled back side. For diameters of 350 mm we recommend the GALAXY X-Tap with self-adhesive grinding paper.

PRODUCT ADVANTAGES

- No glue backing, therefore no glue residues
- Good adhesion to work disc as well as good adhesion to grinding paper and grinding foil
- Easy removal and repositioning of grinding paper and grinding foil
- Double sided permanent adhesive and reusable

RECOMMENDED APPLICATIONS

- For direct application to the working disc
- For use with grinding paper and grinding foil

Item No.	Unit	Description
		ADHESIVE CARRIER DISCS, DOUBLE-SIDED
		Ø
95003607	1 Pc.	250 mm
95003608	1 Pc.	300 mm

Please remove protective foil on both sides before initial use

Applying the adhesive carrier disc

Placing e.g. a grinding paper with foil backing on the adhesive carrier disc

Notes

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Qprep Silicon carbide grinding foils

QPREP silicon carbide grinding foils can be used individually and are ideally suited for a wide range of varied materials. They offer a high degree of flexibility, especially for frequently changing material variants. Furthermore, the foils are ideally suited for the "Vakujet" vacuum fixation in the QATM automatic grinding and polishing machine Qpol 300 Bot. QPREP silicon carbide grinding foils are available in diameters of 250 and 300 mm and in 8 different grain sizes.

PRODUCT ADVANTAGES

- Suitable for vacuum fixation
- Particularly high planarity
- No curling
- Tear and water resistant, so weakening during the grinding process can be excluded
- Low resilience
- Multiple uses possible in connection with QPREP adhesive carrier disc

RECOMMENDED APPLICATIONS

- All-purpose usage
- Suitable for planar, pre- and fine grinding steps due to different grain sizes

Item No.	Unit	Description	
		SILICON CARBIDE GRINDING FOILS	
		Grain FEPA standard	
		• **Fixation system: Adhesive carrier disc**	
		250 mm Ø	
92008557	100 Pcs.	SiC grinding foil	P120
92008558	100 Pcs.	SiC grinding foil	P180
95000899	100 Pcs.	SiC grinding foil	P240
92006305	100 Pcs.	SiC grinding foil	P320
92006304	100 Pcs.	SiC grinding foil	P600
95000900	100 Pcs.	SiC grinding foil	P800
92008559	100 Pcs.	SiC grinding foil	P1200
92008639	100 Pcs.	SiC grinding foil	P2500
		300 mm Ø	
92008561	100 Pcs.	SiC grinding foil	P120
92008658	100 Pcs.	SiC grinding foil	P180
95000902	100 Pcs.	SiC grinding foil	P240
92006303	100 Pcs.	SiC grinding foil	P320
92006302	100 Pcs.	SiC grinding foil	P600
95000903	100 Pcs.	SiC grinding foil	P800
92008562	100 Pcs.	SiC grinding foil	P1200
92008621	100 Pcs.	SiC grinding foil	P2500

Notes

Qprep Silicon carbide grinding paper with foil backing

Silicon carbide grinding paper with foil backing can be used individually and are ideally suited for a wide range of varied materials. They offer a high degree of flexibility, especially for frequently changing material variants. Furthermore, the foiled paper enables the use of the "Vakujet" vacuum fixation in the QATM automatic grinding and polishing machine Qpol 300 Bot. QPREP silicon carbide grinding paper with foil backing is available in diameters of 250 and 300 mm and in 12 different grain sizes. For a diameter of 350 mm we recommend the GALAXY X-Tap with self-adhesive grinding paper.

PRODUCT ADVANTAGES

- Suitable for vacuum fixation
- Directionally oriented applied abrasive grains with homogeneous distribution for a high cutting effect and efficient material removal
- Ideally suited for the QPREP adhesive carrier disc
- 12 grain sizes for a wide range of applications

RECOMMENDED APPLICATIONS

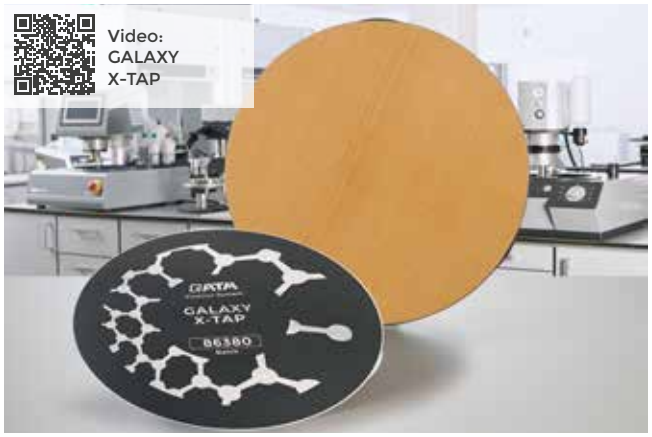
- All-purpose usage
- Suitable for planar, pre- and fine grinding steps due to different grain sizes
- Alternatively also available as self-adhesive version or without adhesive/foil backing

Item No.	Unit	Description	
		SILICON CARBIDE GRINDING PAPER WITH FOIL BACKING	
			Grain FEPA standard
		• **Fixation system: Adhesive carrier disc**	
		250 mm Ø	
95011928	100 Pcs.	SiC grinding paper with foil backing	P80
95011929	100 Pcs.	SiC grinding paper with foil backing	P120
95011930	100 Pcs.	SiC grinding paper with foil backing	P180
95011931	100 Pcs.	SiC grinding paper with foil backing	P240
95011932	100 Pcs.	SiC grinding paper with foil backing	P320
95011933	100 Pcs.	SiC grinding paper with foil backing	P400
95011934	100 Pcs.	SiC grinding paper with foil backing	P500
95011935	100 Pcs.	SiC grinding paper with foil backing	P600
95011936	100 Pcs.	SiC grinding paper with foil backing	P800
95011937	100 Pcs.	SiC grinding paper with foil backing	P1000
95011938	100 Pcs.	SiC grinding paper with foil backing	P1200
95011939	100 Pcs.	SiC grinding paper with foil backing	P2500
		300 mm Ø	
95011943	100 Pcs.	SiC grinding paper with foil backing	P80
95011944	100 Pcs.	SiC grinding paper with foil backing	P120
95011945	100 Pcs.	SiC grinding paper with foil backing	P180
95011946	100 Pcs.	SiC grinding paper with foil backing	P240
95011947	100 Pcs.	SiC grinding paper with foil backing	P320
95011948	100 Pcs.	SiC grinding paper with foil backing	P400
95011949	100 Pcs.	SiC grinding paper with foil backing	P500
95011950	100 Pcs.	SiC grinding paper with foil backing	P600
95011951	100 Pcs.	SiC grinding paper with foil backing	P800
95011952	100 Pcs.	SiC grinding paper with foil backing	P1000
95011953	100 Pcs.	SiC grinding paper with foil backing	P1200
95011954	100 Pcs.	SiC grinding paper with foil backing	P2500

FIXATION SYSTEM FOR SELF-ADHESIVE GRINDING PAPER

Qprep GALAXY X-Tap

The QPREP GALAXY X-Tap is ideally suited for fast and residue-free attachment of self-adhesive grinding papers and polishing cloths. This special attachment system offers minimal impact elasticity and can be easily attached thanks to the QPREP magnetic film due to its metal support plate. Like all of our newly developed GALAXY products, the GALAXY X-Tap also comes with our Qprep anti-slip back and thus ensures a secure hold on the QPREP magnetic film.



PRODUCT ADVANTAGES

- Quick change of self-adhesive grinding paper or self-adhesive polishing cloths without adhesive residues
- Low resilience, due to the thin and solid structure of the QPREP GALAXY X-Tap
- Easier cleaning compared to adhesive carrier disc

RECOMMENDED APPLICATIONS

- Preparations with high edge sharpness
- Carrier plate for self-adhesive grinding paper and self-adhesive polishing cloths

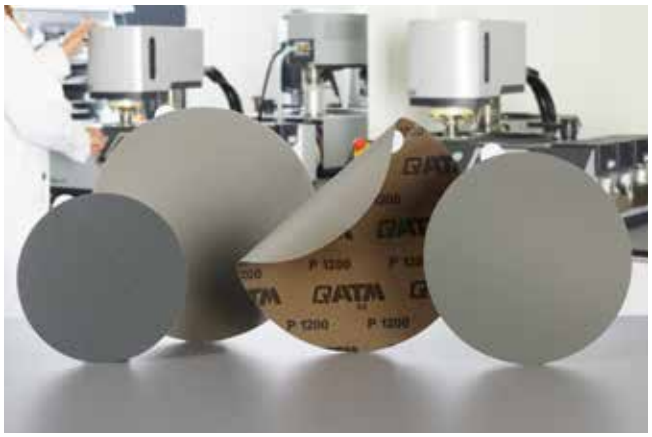
Item No.	Unit	Description
		GALAXY X-TAP
		ø
		GALAXY X-Tap (for using with magnetic foil)
95017019	1 Pc.	200 mm
95017020	1 Pc.	250 mm
95017021	1 Pc.	300 mm
95017022	1 Pc.	350 mm

Applying GALAXY X-Tap on magnetic foil

Placing e.g. self-adhesive grinding paper on GALAXY X-Tap

Qprep Silicon carbide grinding papers, self-adhesive

Self-adhesive QPREP silicon carbide grinding papers can be used individually and are ideally suited for a wide range of varied materials. They offer a high degree of flexibility, especially for frequently changing material variants. The use of the QPREP GALAXY X-Tap fixation system allows efficient and non-residual changing of the grinding paper between the different grinding stages. Self-adhesive QPREP silicon carbide grinding paper is available in diameters of 200 / 250 / 300 and 350 mm and in 13 different grain sizes.



PRODUCT ADVANTAGES

- Directionally oriented applied abrasive grains with homogeneous distribution for a high cutting effect and efficient material removal
- Very high adhesion on the fixation system
- Low resilience in conjunction with QPREP GALAXY X-Tap

RECOMMENDED APPLICATIONS

- All-purpose usage
- Suitable for planar, pre- and fine grinding steps due to different grain sizes

Item No.	Unit	Description	
		SILICON CARBIDE GRINDING PAPERS, SELF-ADHESIVE	
		Grain FEPA standard	
		• **Fixation system: GALAXY X-Tap**	
		200 mm Ø	
92002544	100 Pcs.	SiC grinding paper	P80
92002545	100 Pcs.	SiC grinding paper	P120
92002546	100 Pcs.	SiC grinding paper	P180
92002547	100 Pcs.	SiC grinding paper	P240
92002548	100 Pcs.	SiC grinding paper	P320
92002549	100 Pcs.	SiC grinding paper	P400
92004516	100 Pcs.	SiC grinding paper	P600
92002550	100 Pcs.	SiC grinding paper	P800
92002551	100 Pcs.	SiC grinding paper	P1000
92002638	100 Pcs.	SiC grinding paper	P1200
92002761	100 Pcs.	SiC grinding paper	2400*
92004561	100 Pcs.	SiC grinding paper	P2500
92002762	100 Pcs.	SiC grinding paper	4000*

*slurried (uniform orientation of the abrasive particles), for a finer grinding pattern

		250 mm Ø	
92001643	100 Pcs.	SiC grinding paper	P80
92001644	100 Pcs.	SiC grinding paper	P120
92001645	100 Pcs.	SiC grinding paper	P180
92004953	100 Pcs.	SiC grinding paper	P240
92001647	100 Pcs.	SiC grinding paper	P320
92001648	100 Pcs.	SiC grinding paper	P400
92001649	100 Pcs.	SiC grinding paper	P600
92001650	100 Pcs.	SiC grinding paper	P800
92001651	100 Pcs.	SiC grinding paper	P1000
92001652	100 Pcs.	SiC grinding paper	P1200
92002763	100 Pcs.	SiC grinding paper	2400*
92004563	100 Pcs.	SiC grinding paper	P2500
92002764	100 Pcs.	SiC grinding paper	4000*

*slurried (uniform orientation of the abrasive particles), for a finer grinding pattern

Item No.	Unit	Description	
		SILICON CARBIDE GRINDING PAPERS, SELF-ADHESIVE	
		Grain FEPA standard	
		• **Fixation system: GALAXY X-Tap**	
		300 mm Ø	
92001654	100 Pcs.	SiC grinding paper	P80
92001655	100 Pcs.	SiC grinding paper	P120
92001657	100 Pcs.	SiC grinding paper	P180
92001658	100 Pcs.	SiC grinding paper	P240
92001659	100 Pcs.	SiC grinding paper	P320
92001660	100 Pcs.	SiC grinding paper	P400
92001661	100 Pcs.	SiC grinding paper	P600
92001662	100 Pcs.	SiC grinding paper	P800
92001663	100 Pcs.	SiC grinding paper	P1000
92001664	100 Pcs.	SiC grinding paper	P1200
92002765	100 Pcs.	SiC grinding paper	2400*
92004564	100 Pcs.	SiC grinding paper	P2500
92002766	100 Pcs.	SiC grinding paper	4000*
		*slurried (uniform orientation of the abrasive particles), for a finer grinding pattern	
		350 mm Ø	
95017771	100 Pcs.	SiC grinding paper	P80
95017772	100 Pcs.	SiC grinding paper	P120
95017773	100 Pcs.	SiC grinding paper	P180
95017774	100 Pcs.	SiC grinding paper	P240
95017775	100 Pcs.	SiC grinding paper	P320
95017776	100 Pcs.	SiC grinding paper	P400
95017777	100 Pcs.	SiC grinding paper	P600
95017778	100 Pcs.	SiC grinding paper	P800
95017779	100 Pcs.	SiC grinding paper	P1000
95017780	100 Pcs.	SiC grinding paper	P1200
95017781	100 Pcs.	SiC grinding paper	P2500

Qnote **For SiC grinding paper, self-adhesive:** If the protective film on the back is not removed, the product can be used like grinding paper with a foil backing. To do this, simply remove the pull tab.

Notes

Qprep Zirconia alumina grinding papers, self-adhesive

QPREP Zirconia alumina grinding papers are high-performance grinding papers with a long lifetime for planar and pre-grinding. The zirconia alumina grain used constantly releases new cutting surfaces during the grinding process and enables efficient stock removal even at high contact forces. The grinding paper is free of silicon carbide and is therefore also suitable for sample preparation for optical emission spectrometry (spectral analysis OES). QPREP zirconia alumina grinding paper is available in diameters of 200 / 250 / and 300 mm and in 3 different pre-grinding grit sizes.

PRODUCT ADVANTAGES

- Long lifetime
- Very high stock removal
- Low resilience in conjunction with QPREP GALAXY X-Tap

RECOMMENDED APPLICATIONS

- Planar and pre-grinding of larger specimen cross-sections
- Sample preparation for spectral analysis

Item No.	Unit	Description	
		ZIRCONIA ALUMINA GRINDING PAPERS, SELF-ADHESIVE	
			Grain FEPA standard
		• **Fixation system: GALAXY X-Tap**	
		200 mm Ø	
92002374	25 Pcs.	Zirconia alumina grinding paper	P60
92002376	25 Pcs.	Zirconia alumina grinding paper	P180
		250 mm Ø	
92002382	25 Pcs.	Zirconia alumina grinding paper	P60
92002383	25 Pcs.	Zirconia alumina grinding paper	P120
		300 mm Ø	
92002386	25 Pcs.	Zirconia alumina grinding paper	P60
92002387	25 Pcs.	Zirconia alumina grinding paper	P120

Notes

FIXATION SYSTEM FOR SILICON GRINDING PAPERS WITHOUT ADHESIVE/FOIL BACKING

Qprep GALAXY QUICK-Tap

The reusable fast and time saving fixation system for plain backed grinding paper. As an alternative to the clamping ring and adhesive film, the innovative QPREP GALAXY Quick-Tap is ideally suited for fixing grinding paper without adhesive/foil backing. Designed to be reusable, the thin layer of our new innovative fixation system resists high shear forces and ensures that the plain backed paper adheres securely to the GALAXY Quick-Tap. Like all new Galaxy products, the Quick-Tap features the Qprep Antislip backside for secure retention of the Qprep magnetic film.

PRODUCT ADVANTAGES

- Optimized adhesion
- Low impact elasticity
- Reduction of pencil effect and edge rounding
- Possibility to position the specimen holder beyond the edge of the grinding paper during semi-automatic and automatic specimen preparation
- Sustainable and resource-saving compared to using grinding paper with adhesive/foil backing
- Allows hundreds of paper changes

RECOMMENDED APPLICATIONS

- For use with grinding paper without adhesive/foil backing
- Quick and easy as well as repeated fixation of grinding paper
- For direct attachment to QPREP magnetic foil

Item No.	Unit	Description
		GALAXY QUICK-TAP
		ø
		GALAXY Quick-Tap (for using with magnetic foil)
95017587	1 Pc.	200 mm
95017484	1 Pc.	250 mm
95017485	1 Pc.	300 mm

Applying GALAXY Quick-Tap on magnetic foil

Placing e.g. grinding paper without adhesive/foil backing on GALAXY Quick-Tap

Qnote **on the GALAXY Quick-Tap:** Dust and abrasion on the surface of the GALAXY Quick-Tap can reduce the adhesive strength and life of your GALAXY Quick-Tap. We recommend cleaning the adhesive layer with warm water and a few drops of detergent after approximately 100 paper changes. After cleaning, the Quick Tap will regain its original adhesive strength. To permanently protect the surface of the Quick Tap from dust, simply apply fresh, unused abrasive paper after use. This ensures safe, dust-free storage and the GALAXY Quick-Tap is immediately ready for use.

Qprep Silicon carbide grinding papers without adhesive/foil backing

QPREP silicon carbide grinding papers without adhesive/foil backing can be used individually and are ideally suited for a wide range of varied materials. They offer a high degree of flexibility, especially for frequently changing material variants. The grinding paper without adhesive/foil backing can be fixed directly with the QPREP Quick Tap (to the work disc or magnetic foil) or with the QPREP clamping ring to the work disc. Both ensure low resilience during the grinding process. QPREP silicon carbide grinding paper without adhesive/foil backing is available in diameters of 200 / 230 / 250 and 300 mm and in 15 different grain sizes.

PRODUCT ADVANTAGES

- Directionally oriented applied abrasive grains with homogeneous distribution for a high cutting effect and efficient material removal
- Low resilience

RECOMMENDED APPLICATIONS

- All-purpose usage
- Suitable for planar, pre- and fine grinding steps due to different grain sizes

Item No.	Unit	Description	
		SILICON CARBIDE GRINDING PAPERS WITHOUT ADHESIVE/FOIL BACKING	
			Grain FEPA standard
		• **Fixation system: GALAXY Quick-Tap or clamping ring**	
		200 mm Ø	
92001811	100 Pcs.	SiC grinding paper, plain backed	P80
92001812	100 Pcs.	SiC grinding paper, plain backed	P120
92001813	100 Pcs.	SiC grinding paper, plain backed	P180
92001814	100 Pcs.	SiC grinding paper, plain backed	P240
92001815	100 Pcs.	SiC grinding paper, plain backed	P320
92001816	100 Pcs.	SiC grinding paper, plain backed	P400
92001817	100 Pcs.	SiC grinding paper, plain backed	P500
92001818	100 Pcs.	SiC grinding paper, plain backed	P600
92001819	100 Pcs.	SiC grinding paper, plain backed	P800
92001820	100 Pcs.	SiC grinding paper, plain backed	P1000
92001821	100 Pcs.	SiC grinding paper, plain backed	P1200
92002634	100 Pcs.	SiC grinding paper, plain backed	2400*
92004557	100 Pcs.	SiC grinding paper, plain backed	P2500
92002640	100 Pcs.	SiC grinding paper, plain backed	4000*

*slurried (uniform orientation of the abrasive particles), for a finer grinding pattern

SILICON CARBIDE GRINDING PAPERS WITHOUT ADHESIVE/FOIL BACKING

Grain FEPA standard

- **Fixation system: GALAXY Quick-Tap or clamping ring**

230 mm Ø

Item No.	Unit	Description	
92001568	100 Pcs.	SiC grinding paper, plain backed	P80
92001569	100 Pcs.	SiC grinding paper, plain backed	P120
92001570	100 Pcs.	SiC grinding paper, plain backed	P180
92001571	100 Pcs.	SiC grinding paper, plain backed	P240
92001572	100 Pcs.	SiC grinding paper, plain backed	P320
92001573	100 Pcs.	SiC grinding paper, plain backed	P400
92001574	100 Pcs.	SiC grinding paper, plain backed	P500
92001575	100 Pcs.	SiC grinding paper, plain backed	P600
92001576	100 Pcs.	SiC grinding paper, plain backed	P800
92001577	100 Pcs.	SiC grinding paper, plain backed	P1000
92001578	100 Pcs.	SiC grinding paper, plain backed	P1200
92004558	100 Pcs.	SiC grinding paper, plain backed	P2500
92001579	100 Pcs.	SiC grinding paper, plain backed	4000*

*slurried (uniform orientation of the abrasive particles), for a finer grinding pattern

250 mm Ø

92001581	100 Pcs.	SiC grinding paper, plain backed	P80
92001582	100 Pcs.	SiC grinding paper, plain backed	P120
92001583	100 Pcs.	SiC grinding paper, plain backed	P180
92002369	100 Pcs.	SiC grinding paper, plain backed	P240
92001585	100 Pcs.	SiC grinding paper, plain backed	P320
92001586	100 Pcs.	SiC grinding paper, plain backed	P400
92001587	100 Pcs.	SiC grinding paper, plain backed	P500
92001588	100 Pcs.	SiC grinding paper, plain backed	P600
92001589	100 Pcs.	SiC grinding paper, plain backed	P800
92001590	100 Pcs.	SiC grinding paper, plain backed	P1000
92001591	100 Pcs.	SiC grinding paper, plain backed	P1200
92002636	100 Pcs.	SiC grinding paper, plain backed	2400*
92004559	100 Pcs.	SiC grinding paper, plain backed	P2500
92001592	100 Pcs.	SiC grinding paper, plain backed	4000*

*slurried (uniform orientation of the abrasive particles), for a finer grinding pattern

300 mm Ø

92001593	100 Pcs.	SiC grinding paper, plain backed	P60
92001594	100 Pcs.	SiC grinding paper, plain backed	P80
92001595	100 Pcs.	SiC grinding paper, plain backed	P120
92001596	100 Pcs.	SiC grinding paper, plain backed	P180
92001597	100 Pcs.	SiC grinding paper, plain backed	P240
92001598	100 Pcs.	SiC grinding paper, plain backed	P320
92001599	100 Pcs.	SiC grinding paper, plain backed	P400
92001600	100 Pcs.	SiC grinding paper, plain backed	P500
92001601	100 Pcs.	SiC grinding paper, plain backed	P600
92001602	100 Pcs.	SiC grinding paper, plain backed	P800
92001603	100 Pcs.	SiC grinding paper, plain backed	P1000
92001604	100 Pcs.	SiC grinding paper, plain backed	P1200
92002637	100 Pcs.	SiC grinding paper, plain backed	2400*
92004560	100 Pcs.	SiC grinding paper, plain backed	P2500
92002154	100 Pcs.	SiC grinding paper, plain backed	4000*

*slurried (uniform orientation of the abrasive particles), for a finer grinding pattern

Qprep Grinding papers for Qpol 30

QPREP grinding papers for mobile grinding and polishing equipment are mainly used in mobile materialography rugged field conditions and are available as alumina grinding papers with a Velcro fastener on the back or as silicon carbide grinding papers with an adhesive backing. Both fasteners enable efficient changing of the sandpaper even under rugged field conditions.

PRODUCT ADVANTAGES

- Targeted grinding of smallest areas without influencing surrounding sample areas
- Easy change of grinding paper

RECOMMENDED APPLICATIONS

- Mobile component-materialography
- Deburring samples of complex geometries

Item No.	Unit	Description	
		GRINDING PAPERS FOR MOBILE GRINDER AND POLISHER QPOL 30	
		Ø	**Grain FEPA standard**
		Corundum grinding 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
		Silicon grinding papers with adhesive backing	
92004498	100 Pcs.	30 mm	P400
92004499	100 Pcs.	30 mm	P600
92004631	100 Pcs.	30 mm	P1000

Self-adhesive polishing cloths: view chapter polishing

Notes

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Qprep Grinding belts for Qgrind 100

QPREP grinding belts can be used very well for manual pre-grinding and deburring. They are waterproof and very robust for wet grinding with the Qgrind 100.

PRODUCT ADVANTAGES

- Waterproof
- High robustness
- High stock removal

RECOMMENDED APPLICATIONS

- Pre-grinding and deburring
- Preparations for macro etching for weld testing

Item No.	Unit	Description	
		GRINDING BELTS FOR QGRIND 100	
		Dimensions	**Grain FEPA standard**
		Aluminum oxide grinding 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
		Silcon carbide grinding 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

Notes

QATM®

MATERIALOGRAPHY & HARDNESS TESTING

Qprep

Consumables for polishing

Polishing

The polishing of the materialographic specimen serves, similar like grinding and after the grinding step, to remove the deformation introduced into the material. For this purpose, the unbound abrasive/grain is applied to special polishing cloths in gradually finer grain sizes. A distinction is made between three polishing processes with different polishing media:

Pre-polishing	Grain Size 15 µm to 9 µm	Hard-woven or hard-pressed cloths
Intermediate polishing	Grain Size 9 µm to 3 µm	Hard-woven or lightly pile cloths
Final polishing	Grain Size 3 µm to 0.5 µm Oxide polishing 0.1 µm to 0.05 µm	Pile or flocked cloths, foamed for oxide suspensions

A wide range of QPREP polishing media, lubricants and polishing cloths is available for this purpose.

Diamond Suspension

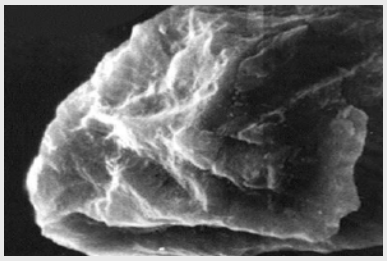
QPREP diamond suspensions are the polishing product of choice for materialographic preparations. The range of different chemical bases (water, alcohol, or oil) allows scratch-free polishing, depending on the application.

QPREP diamond suspensions are characterized by

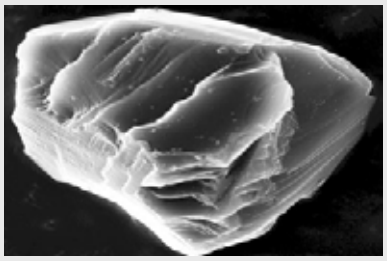
- **A narrow tolerance grain size distribution for a uniform scratch pattern.**
- **The optimized diamond concentration for high removal rate and time-saving polishing.**
- **Suitable for use with all materials.**

The abrasive used is (industrial) diamond, which is divided into monocrystalline and polycrystalline, since different levels of material removal rate are achieved.

Polycrystalline (industrial) diamonds:
It consists of a multi-crystal, which breaks into smaller components when used, thus repeatedly creating new cutting edges (self-sharpening effect). This results in a high material removal rate and time-optimized polishing results.



Monocrystalline (industrial) diamonds:
It consists of a single crystal that breaks into small slices like a block when used. There is no self-sharpening effect as with polycrystalline diamonds. Due to this, a more material-friendly but also more time-consuming removal rate is achieved during polishing.



QPREP diamond suspensions are used in combination with a lubricant based on water, alcohol, or oil. The right mixing ratio between suspension and lubricant must be observed to achieve correct polishing results. Alternatively, QATM offers the QPREP DIA-Complete All-In-One diamond suspension. It contains the lubricant in an optimized ratio, which eliminates the need for manual dosing and mixing of suspension and lubricant.

Qprep DIA-COMPLETE Poly

QPREP DIA-Complete Poly (polycrystalline) is an all-in-one diamond suspension that is used for a wide range of materials.

PRODUCT ADVANTAGES

- High material removal rate
- Easy handling
- Optimally adjusted ratio of suspension and lubricant
- Process reliable and repeatable polishing results
- Water based (eco-friendly)
- Closely tolerated grain size

RECOMMENDED APPLICATIONS

- All material besides water-sensitiv materials
- Soft to hard materials
- Manual as well as semi and fully automatic preparation

Item No.	Unit	Description
		DIA-COMPLETE POLY, ALL-IN-ONE DIAMOND SUSPENSION
		Grain Size
		Combined product of diamond suspension and lubricant
95011833	500 ml	0.25 µm
95011839	1 l	0.25 µm
95011845	2.5 l	0.25 µm
95016023	5 l	0.25 µm
95011834	500 ml	1 µm
95011840	1 l	1 µm
95011846	2.5 l	1 µm
95015394	5 l	1 µm
95011835	500 ml	3 µm
95011841	1 l	3 µm
95011847	2.5 l	3 µm
95015395	5 l	3 µm
95011836	500 ml	6 µm
95011842	1 l	6 µm
95011848	2.5 l	6 µm
95015396	5 l	6 µm
95011837	500 ml	9 µm
95011843	1 l	9 µm
95011849	2.5 l	9 µm
95015397	5 l	9 µm
95011844	1 l	15 µm

Qprep DIA-COMPLETE Mono

QPREP DIA-Complete Mono (monocrystalline) is an all-in-one diamond suspension that is used for a wide range of materials.

PRODUCT ADVANTAGES

- Gentle material removal rate
- Easy handling
- Optimally adjusted ratio of suspension and lubricant
- Process reliable and repeatable polishing results
- Water based (eco-friendly)
- Closely tolerated grain size

RECOMMENDED APPLICATIONS

- All material besides water-sensitiv materials
- Soft to hard materials
- Manual as well as semi and fully automatic preparation

Item No.	Unit	Description
		DIA-COMPLETE MONO, ALL-IN-ONE DIAMOND SUSPENSION
		Grain Size
		Combined product of diamond suspension and lubricant
95011815	500 ml	1 µm
95011820	1 l	1 µm
95011825	2.5 l	1 µm
95015404	5 l	1 µm
95011816	500 ml	3 µm
95011821	1 l	3 µm
95011826	2.5 l	3 µm
95015405	5 l	3 µm
95011817	500 ml	6 µm
95011822	1 l	6 µm
95011827	2.5 l	6 µm
95015406	5 l	6 µm
95011818	500 ml	9 µm
95011823	1 l	9 µm
95011828	2.5 l	9 µm
95015407	5 l	9 µm

Qprep Diamond suspension polycrystalline

QPREP diamond suspensions are characterized by the narrow tolerance grain size as well as the optimized concentration of polycrystalline diamonds.

PRODUCT ADVANTAGES

- High material removal rate
- Water based (eco-friendly)
- Closely tolerated grain size

RECOMMENDED APPLICATIONS

- All material besides water-sensitiv materials
- Soft to hard materials
- For manual fine dosing with lubricant

Item No.	Unit	Description
		DIAMOND SUSPENSION POLYCRYSTALLINE
		Grain Size
92002353	250 ml	1 µm
95016017	500 ml	1 µm
92004798	1 l	1 µm
95002761	2.5 l	1 µm
95014519	5 l	1 µm
92002354	250 ml	3 µm
95016018	500 ml	3 µm
92004799	1 l	3 µm
95002762	2.5 l	3 µm
95014520	5 l	3 µm
92002355	250 ml	6 µm
95016019	500 ml	6 µm
92004800	1 l	6 µm
95002763	2.5 l	6 µm
95014521	5 l	6 µm
92002356	250 ml	9 µm
95016020	500 ml	9 µm
92004801	1 l	9 µm
95002764	2.5 l	9 µm
95014522	5 l	9 µm
95005738	1 l	15 µm

Qprep Diamond suspension monocrystalline

QPREP diamond suspensions are characterized by the narrow tolerance grain size as well as the optimized concentration of monocrystalline diamonds.

PRODUCT ADVANTAGES

- Gentle material removal rate
- Water based (eco-friendly)
- Closely tolerated grain size

RECOMMENDED APPLICATIONS

- All material besides water-sensitiv materials
- Soft to hard materials
- For manual fine dosing with lubricant

Color code diamond suspension monocrystalline

Grain Size µm	Color
1 µm	Blue
3 µm	Green
6 µm	Yellow
9 µm	Red

Item No.	Unit	Description
		DIAMOND SUSPENSION MONOCRYSTALLINE
		Grain Size
92002346	250 ml	1 µm
95016012	500 ml	1 µm
92004791	1 l	1 µm
95002755	2.5 l	1 µm
95014514	5 l	1 µm
92002347	250 ml	3 µm
95016013	500 ml	3 µm
92004792	1 l	3 µm
95002756	2.5 l	3 µm
95014515	5 l	3 µm
92002348	250 ml	6 µm
95016014	500 ml	6 µm
92004793	1 l	6 µm
95002757	2.5 l	6 µm
95014516	5 l	6 µm
92002349	250 ml	9 µm
95016015	500 ml	9 µm
92004794	1 l	9 µm
95002758	2.5 l	9 µm
95014517	5 l	9 µm

Qprep Diamond suspension (alcohol-based / oil-based)

For polishing water-sensitive materials, QPREP diamond suspensions based on alcohol or oil are used. These have the same excellent polishing properties as the other diamond suspensions.

PRODUCT ADVANTAGES

- Anticorrosive
- High lubricity with ductile materials
- Closely tolerated grain size

RECOMMENDED APPLICATIONS

- All materials especially materials prone to corrosion
- Soft to hard materials
- For manual fine dosing with lubricant

Item No.	Unit	Description
		DIAMOND SUSPENSION (ALCOHOL-BASED) POLYCRYSTALLINE
		Grain Size
95003494	1 l	1 µm
95003495	1 l	3 µm
95003496	1 l	6 µm
95003497	1 l	9 µm
		DIAMOND SUSPENSION (ALCOHOL-BASED) MONOCRYSTALLINE
		Grain Size
95003490	1 l	1 µm
95003491	1 l	3 µm
95003492	1 l	6 µm
95003493	1 l	9 µm
		DIAMOND SUSPENSION (OIL-BASED) POLYCRYSTALLINE
		Grain Size
95002792	1 l	1 µm
95002793	1 l	3 µm
95002794	1 l	6 µm
95002795	1 l	9 µm

Qprep Spray nozzle

The QPREP Spray nozzle is suited for optimum fine dispersion of suspension and lubricant on the polishing cloth during manual polishing.

Item No.	Unit	Description
		SPRAY NOZZLE
		Description
		• **for diamond suspensions of all grain sizes** • **for 250 ml, 500 ml and 1 L bottles**
95016723	1 Pc.	Spray nozzle, hose length approx. 160 mm

Qprep Qdoser ONE dosing system for suspensions

The Qdoser ONE dosing system is an easy-to-use solution for manual or semi-automatic polishing processes. QATM's standard suspension and lubricant bottles can be quickly screwed on the dosing attachment. The dosing volume is closely and continuously controlled with an adjusting screw. The system can be applied with the Qdoser ONE holder to the polishing heads Qpol GO and ECO. If used with manual grinding/polishing machines, the Qdoser ONE stand with suction cups can be placed on the machines.

PRODUCT ADVANTAGES

- Dosing attachment for standard and suspension bottles
- Adjustable dosing volume
- Can be freely positioned with stand
- Can be screwed to polishing heads Qpol GO and ECO

Item No.	Unit	Description
		QDOSER ONE DOSING SYSTEM FOR SUSPENSIONS
		Description
Z5631015	1 Pc.	Qdoser ONE basic module
Z5631014	1 Pc.	Qdoser ONE holder
Z5631016	1 Pc.	Qdoser ONE stand

Notes

Qprep Diamond spray and paste

As an alternative to the diamond suspension as a polishing product, QATM also offers QPREP diamond spray and diamond paste. These are particularly well suited for commissioning new polishing cloths. When using these, make sure that the QPREP lubricants are also used.

PRODUCT ADVANTAGES

- Diamonds attach better to the polishing cloth due to non-liquid carrier medium
- Closely tolerated grain size
- High stock removal rate

RECOMMENDED APPLICATIONS

- Commissioning of new polishing cloths for higher percentage of bonded diamonds on the polishing cloth

Item No.	Unit	Description
		DIAMOND SPRAY POLYCRYSTALLINE
		Grain Size
		CFC-free
95016025	200 ml	1 µm
95016026	200 ml	3 µm
95016027	200 ml	6 µm
95016028	200 ml	9 µm
		DIAMOND PASTE POLYCRYSTALLINE
		Grain Size
		10 g syringe
92002340	10 g	1 µm
92002341	10 g	3 µm
92002342	10 g	6 µm
92002343	10 g	9 µm
92002344	10 g	15 µm
		DIAMOND PASTE MONOCRYSTALLINE
		Grain Size
		10 g syringe
92002333	10 g	1 µm
92002316	10 g	3 µm
92002335	10 g	6 µm
92002336	10 g	9 µm
92002337	10 g	15 µm

Qprep Diamond lubricants

QPREP lubricants (diamond lubricants) based on water, alcohol and oil are used with the polishing products mentioned above. The lubricant ensures even distribution of the polishing product on the polishing cloth. In addition, it also serves to cool the cloth and sample while polishing.

QPREP diamond lubricant yellow (water-based) is especially environmentally friendly and provides an even lubricating film on the polishing cloth.

QPREP diamond lubricant blue (alcohol-based) has a higher viscosity and surface tension. Due to this, the lubricant remains longer on the polishing cloth. This allows a more economical dosage.

QPREP diamond lubricant red (oil based) is an oil - water emulsion and due to its higher viscosity ensures a consistently stable lubricating film on the polishing cloth. Optimal for heat as well as water sensitive materials.

Item No.	Unit	Description		
		DIAMOND LUBRICANT		
		Color	**Characteristics**	
		• **for manual dosing with diamond suspension**		
92005509	1 l	Yellow	- water-based -	ecologically friendly
92004925	2.5 l	Yellow	- water-based -	ecologically friendly
92005510	5 l	Yellow	- water-based -	ecologically friendly
95016174	10 l	Yellow	- water-based -	ecologically friendly
95000901	1 l	Blue	- alcohol-based -	for water-free preparation
95000911	2.5 l	Blue	- alcohol-based -	for water-free preparation
95001194	5 l	Blue	- alcohol-based -	for water-free preparation
95001759	1 l	Red	- oil-based -	for water-free preparation
95001772	2.5 l	Red	- oil-based -	for water-free preparation
95001784	5 l	Red	- oil-based -	for water-free preparation
		DIAMOND LUBRICATION CONCENTRATE		
		Color	**Characteristics**	
		• **for manual dosing with diamond suspension**		
95016362	1 l	Blue	- for alcohol-based lubricant - for 10 L lubricant, mix with 9 parts of ethanol	
		ETHANOL		
		• **individually applicable for intensive cleaning**		
95004662	1 l	Ethanol, 99% denatured		
95004663	5 l	Ethanol, 99% denatured		
95004664	10 l	Ethanol, 99% denatured		

Qprep Fine polishing suspensions

QPREP fine polishing suspensions are the polishing products of choice for the most demanding polishing requirements. In this process, a chemical-mechanical polishing is performed using colloidal silicon dioxide or aluminum oxide. A colloidal suspension is a heterogeneous mixture, in which fine particles are evenly distributed in a liquid, and do not settle. Fine polishing suspensions with colloidal silicon dioxide utilize this stability for effective and gentle polishing, which improves surface quality and consistently delivers high-quality results.

PRODUCT ADVANTAGES

- Highest surface qualities
- Removal of all deformation with vibration polishing
- Polishing/removing scratches in the range of 0.1 µm to 0.05 µm

RECOMMENDED APPLICATIONS

- Detailed microstructure analysis
- Very soft or very hard and ductile materials

Item No.	Unit	Description			
		FINE POLISHING SUSPENSIONS			
		Description	**ph-value**	**Grain Size**	
		Fine polishing suspension (Al_2O_3) • **does not crystallize** • **for ferrous materials, polymers, composites, PCB, rocks and minerals**			
92002534	1 l	Eposal	pH≈8.0	0.06 µm	
		Colloidal silica • **for polishing, also mixable with diluted etchant** • **for ferrous and non-ferrous materials, ceramics** • **especially for soft materials like Al, Cu, Ti and solder joints**			
92002536	1 l	Eposil F	pH≈9.5	0.1 µm	
95013858	1 l	Eposil Non Dry	pH≈9.5	0.05 µm	(does not crystallize)
95013958	10 l	Eposil Non Dry	pH≈9.5	0.05 µm	(does not crystallize)
92002541	1 kg	Eposil M	pH≈9.5	0.06 µm	
		Colloidal silica • **for titanium, nickel, tin and its alloys**			
95001206	1 kg	Eposil M11	pH≈11.0	0.06 µm	
		Water-free fine polishing suspension • **e.g. for magnesium, zinc**			
95005033	1 kg	Etosil E	pH≈7.0	0.06 µm	
		ALUMINA SUSPENSION, CALCINATED			
		Description		**Grain Size**	
		Aqueous concentrate, to dilute, 3-5 part of dest. water			
92002533	1 l	Alumina suspension		0.3 µm	
92002532	1 l	Alumina suspension		0.6 µm	
92004950	1 l	Alumina suspension		1 µm	

Polishing cloths

For a deformation- and relief-free polishing result, choosing the right polishing cloth is crucial. The cloth material and texture (silk, artificial silk, synthetic fibers, wool fabric, felt, flocked or foamed synthetic fabrics) and the resulting impact elasticity play a decisive role in the selection of the suiting polishing cloth. The fastening systems (GALAXY metal disc with magnetic foil or GALAXY X-Tap) also differ, and can influence the polishing result.
The GALAXY polishing cloths, optimized with the QPREP anti-slip backing, withstand high shear forces even under high contact pressures and fully loaded sample holders, ensuring a stable polishing process at all times.

At the beginning of **pre-polishing**, polishing cloths with a low resilience (hard cloth material) are selected, as these support the retention of edge sharpness. In comparison to the further polishing steps, a higher material removal is achieved during pre-polishing due to longer polishing times.

Polishing cloths with different resilience are used for **intermediate polishing**. The objective of the polish and the material to be polished are always the determining factors for the selection of a suitable polishing cloth.

Final polishing is performed on polishing cloths with a high resilience with short polishing times to avoid relief formation. Final polishing can either be done with diamond suspensions (3 µm - 0.5 µm) or, for the highest demands for analysis, by using fine polishing suspensions (oxide polish 0.1 µm - 0.05 µm) or (alumina 1 µm - 0.3 µm).

The selection of QPREP polishing cloths offers a suitable cloth for every polishing step, which, with the matching QPREP diamond suspension, ensures excellent polishing results.

PROPERTIES OF QATM POLISHING CLOTHS

Polishing cloth	Recommended polishing stage	Cloth material & texture	Impact elasticity	Cloth hardness	Recommended grain sizes	Recommended application	Version CALAXY	Version Self-adhesive
ALPHA	Pre-polishing	Laminated chemotextile fabric, perforated	Low	Very hard	15/9 µm	For ceramics, hard metals, cast iron, and aluminum. Particularly long service life, material removal rate, and flatness.	✓	✓
BETA	Pre-polishing	Coated polyester fabric	Low	Hard	15/9/6 µm	Materials with high hardness, steel, cast iron, hard metals, ceramics	✓	✓
DELTA	Pre-polishing	Satin-woven acetate silk	Medium	Medium	9/6/3 µm	For carbon steels, precious metals, coatings, plastics (CFRP, GFRP), aluminum	✓	✓
GAMMA	Pre-and intermediate polishing	Satin-woven acetate silk	Medium	Medium	9/6/3 µm	For carbon steels, non-ferrous metals, coatings, plastics (CFRP, GFRP)	✓	✓
PHI	Pre-, intermediate and end polishing	Synthetic fiber	Medium	Medium	9/6/3/1 µm	For ferrous and non-ferrous metals, minerals, ceramics, composite materials	✓	✗
SIGMA	Intermediate and end polishing	Taffeta-bound wool	High	Soft	6/3/1 µm	For all materials	✓	✓
ETA	End polishing	Short-pile synthetic flock	High	Medium	3/1 µm	For all materials of medium to high hardness	✓	✗
IOTA	Final as well as ultra-fine polishing with fine polishing suspension	Dense and long-pile synthetic flock	Very high	Soft	3/1 µm	For all materials, especially hard materials. Suitable for oxide suspensions	✓	✓
ZETA	Final as well as ultra-fine polishing with fine polishing suspension	Dense and short-pile synthetic flock	Very high	Soft	3/1 µm	For all materials. Suitable for oxide suspensions as well as alumina	✓	✓
KAPPA	Ultra-fine polishing with fine polishing suspension	Thick polishing felt	High	Soft		For all materials. Suitable for alumina	✗	✓
OMEGA	Ultra-fine polishing with fine polishing suspension	Roughened polyurethane, porous	High	Soft		For all materials. Suitable for oxide suspensions (chemically resistant)	✓	✓
LAMBDA	Ultra-fine polishing with fine polishing suspension	Textured polyurethane, porous	High	Soft		For all materials. Suitable for oxide suspensions as well as alumina (chemically resistant)	✓	✗

Notes

FIXATION SYSTEM FOR GALAXY POLISHING CLOTHS

Qprep Magnetic foil for GALAXY polishing cloths

For low resilience during grinding (or polishing) as well as best adhesion and easy handling of the QPREP GALAXY grinding discs (or polishing cloths), the QPREP magnetic foil is perfectly suited.

PRODUCT ADVANTAGES

- Low resilience
- One time application on the working disc of the machine
- Long service life
- Different magnet. field strengths

RECOMMENDED APPLICATIONS

- For the use of all GALAXY grinding discs and polishing cloths
- Frequent change of grinding discs and polishing cloths

Item No.	Unit	Description	
		MAGNETIC FOIL, SELF-ADHESIVE	
		Ø	**thickness**
		Magnetic foil, strong adhesion **• to apply on working wheel**	
95016345	1 Pc.	200 mm	1 mm
95016346	1 Pc.	250 mm	1 mm
95012161	1 Pc.	300 mm	1 mm
95014137	1 Pc.	350 mm	1 mm
		Magnetic foil, strongest adhesion **• to apply on working wheel** **• increased magnetic adhesion by higher material thickness**	
95016300	1 Pc.	250 mm	2 mm
95016301	1 Pc.	300 mm	2 mm

Applying the magnetic foil

Placing e.g. a GALAXY polishing cloth on the magnetic foil

Qprep GALAXY polishing cloths

QPREP GALAXY polishing cloths with Qprep Anti-Slip backing offer the right cloth material for all materials and analysis purposes, with a secure grip on the magnetic foil every time.

PRODUCT ADVANTAGES

- Faster application because there is no need to glue on the polishing cloth
- Low resilience due to metallic carrier plate
- Easier handling due to grip tabs on the carrier plate

RECOMMENDED APPLICATIONS

- Process-reliable and reproducible polishing results
- Use with GALAXY magnetic foil

GALAXY – ALPHA
- **Suitable for pre-polishing**
- **Very hard, perforated chemical fiber cloth**
- **For ceramics, hard metal, steel, grey cast iron, aluminum**
- **High lifetime and stock removal**
- **For use with diamond grain size: 15/9 µm**
- **Fixation system: Magnetic foil**

Item No.	Unit	Description	Ø
95001407	5 Pcs.	Alpha	200 mm
95001408	5 Pcs.	Alpha	250 mm
95001409	5 Pcs.	Alpha	300 mm
95013994	5 Pcs.	Alpha	350 mm

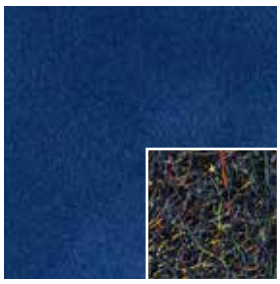
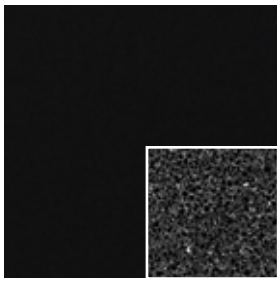
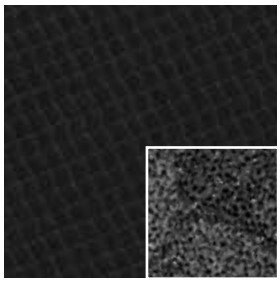
GALAXY – BETA
- **Suitable for pre-polishing**
- **Hard synthetic cloth**
- **Materials with high hardness, steel, grey cast iron, hard metal, ceramics**
- **For use with diamond grain size: 15/9/6 µm**
- **Fixation system: Magnetic foil**

Item No.	Unit	Description	Ø
95001410	5 Pcs.	Beta	200 mm
95001411	5 Pcs.	Beta	250 mm
95001412	5 Pcs.	Beta	300 mm
95013995	5 Pcs.	Beta	350 mm

GALAXY – DELTA
- **Suitable for pre- & intermediate polishing**
- **Medium hard silk cloth**
- **C-steels, precious metal, plastics [CFK, GFK], coatings, aluminum**
- **For use with diamond grain size: 9/6/3 µm**
- **Fixation system: Magnetic foil**

Item No.	Unit	Description	Ø
95001413	5 Pcs.	Delta	200 mm
95001414	5 Pcs.	Delta	250 mm
95001415	5 Pcs.	Delta	300 mm
95013996	5 Pcs.	Delta	350 mm

Item No.	Unit	Description		
		GALAXY POLISHING CLOTH WITH METAL BACK		
		Description	**Ø**	
		GAMMA – Polishing cloth • **Suitable for pre- & intermediate polishing** • **Medium hard silk cloth** • **C-steels, precious metal, coatings, plastics [CFK, GFK],** • **For use with diamond grain size: 9/6/3 µm** • **Fixation system: Magnetic foil**		
95017588	5 Pcs.	Gamma	200 mm	NEW
95017589	5 Pcs.	Gamma	250 mm	NEW
95017590	5 Pcs.	Gamma	300 mm	NEW
		GALAXY – PHI • **Suitable for pre-, intermediate-, and end polishing** • **Medium hard chemical fiber cloth** • **For iron, non-ferrous metals, minerals, ceramics, composite materials** • **For use with diamond grain size: 9/6/3/1 µm** • **Fixation system: Magnetic foil**		
95012740	5 Pcs.	Phi	250 mm	
95012741	5 Pcs.	Phi	300 mm	
		GALAXY – SIGMA • **Suitable for intermediate and end polishing** • **Soft wool cloth** • **For all materials** • **For use with diamond grain size: 6/3/1 µm** • **Fixation system: Magnetic foil**		
95001416	5 Pcs.	Sigma	200 mm	
95001417	5 Pcs.	Sigma	250 mm	
95001418	5 Pcs.	Sigma	300 mm	
95013997	5 Pcs.	Sigma	350 mm	
		GALAXY – ETA • **Suitable for end polishing** • **Short flocked, medium hard synthetic cloth** • **For all materials of medium and high hardness** • **For use with diamond grain size: 3/1 µm** • **Fixation system: Magnetic foil**		
95016833	5 Pcs.	Eta	250 mm	
95016834	5 Pcs.	Eta	300 mm	
		GALAXY – IOTA • **Suitable for end polishing as well as fine polishing with fine polishing suspension** • **Long flocked, soft synthetic cloth** • **For all materials, especially hard materials** • **For use with diamond grain size: 3/1 µm** • **Suitable for oxide suspensions** •**Fixation system: Magnetic foil**		
95001419	5 Pcs.	Iota	200 mm	
95001420	5 Pcs.	Iota	250 mm	
95001421	5 Pcs.	Iota	300 mm	
95013998	5 Pcs.	Iota	350 mm	

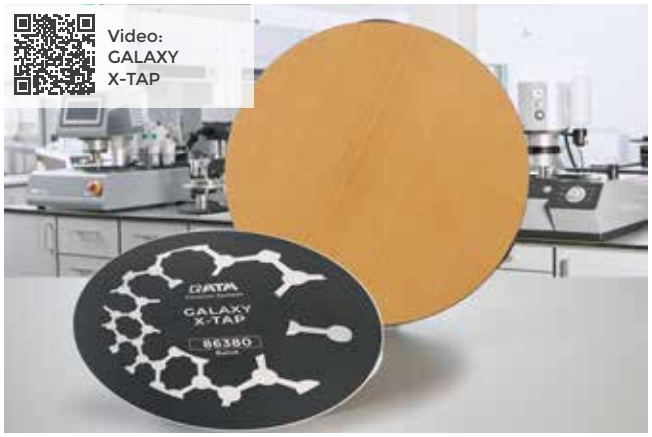
Item No.	Unit	Description		
		GALAXY POLISHING CLOTH WITH METAL BACK		
		Description	**Ø**	
		**GALAXY – ZETA** • **Suitable for end polishing as well as fine polishing with fine polishing suspension** • **Short flocked, soft synthetic cloth** • **For all materials** • **For use with diamond grain size: 3/1 µm** • **Suitable for oxide suspensions as well as alumina** • **Fixation system: Magnetic foil**		
95005776	5 Pcs.	Zeta	200 mm	
95005777	5 Pcs.	Zeta	250 mm	
95005778	5 Pcs.	Zeta	300 mm	
95013999	5 Pcs.	Zeta	350 mm	
		**GALAXY – OMEGA** • **Suitable for fine polishing with fine polishing suspension** • **Soft synthetic cloth (chemical resistant)** • **For all materials** • **Suitable for oxide suspensions** • **Fixation system: Magnetic foil**		
95005779	5 Pcs.	Omega	200 mm	
95005780	5 Pcs.	Omega	250 mm	
95005781	5 Pcs.	Omega	300 mm	
		**GALAXY – LAMBDA** • **Suitable for fine polishing with fine polishing suspension** • **Brushed, structured synthetic cloth (chemical resistant)** • **For all materials** • **Suitable for oxide suspensions as well as alumina** • **Fixation system: Magnetic foil**		
95005782	5 Pcs.	Lambda	200 mm	
95005783	5 Pcs.	Lambda	250 mm	
95005784	5 Pcs.	Lambda	300 mm	

Notes

FIXATION SYSTEM FOR SELF-ADHESIVE POLISHING CLOTHS

Qprep GALAXY X-Tap

The QPREP GALAXY X-Tap is ideally suited for fast and residue-free attachment of self-adhesive grinding papers and polishing cloths. This special fastening system offers low impact elasticity and can be easily applied to the QPREP magnetic foil thanks to its metal carrier plate. Like all our newly developed GALAXY products, the GALAXY X-Tap is also equipped with a QPREP anti-slip backing, ensuring a secure hold on the QPREP magnetic foil.



PRODUCT ADVANTAGES

- Quick change of self-adhesive grinding paper or self-adhesive polishing cloths without adhesive residues
- Low resilience, due to the thin and solid structure of the QPREP GALAXY X-Tap
- Easier cleaning compared to adhesive carrier disc

RECOMMENDED APPLICATIONS

- Preparations with high edge sharpness
- Carrier plate for self-adhesive grinding paper and self-adhesive polishing cloths

Item No.	Unit	Description
		GALAXY X-TAP
		Ø
		GALAXY X-Tap (for using with magnetic foil)
95017019	1 Pc.	200 mm
95017020	1 Pc.	250 mm
95017021	1 Pc.	300 mm
95017022	1 Pc.	350 mm

Applying GALAXY X-Tap on magnetic foil

Placing e.g. self-adhesive polishing cloth on GALAXY X-Tap

Qprep Polishing cloths, self-adhesive

QPREP polishing cloths offer the right cloth material for all materials and analysis purposes.

PRODUCT ADVANTAGES

- Optimized adhesive backing ensures uniform fixing over the entire surface on the fixation system and realized no slipping or detachment of the polishing cloth

RECOMMENDED APPLICATIONS

- For use with GALAXY X-Tap system

Item No.	Unit	Description	
		POLISHING CLOTHS, SELF-ADHESIVE	
		Description	**Ø**
		ALPHA – Polishing cloth • **Suitable for pre-polishing** • **Very hard, perforated chemical fiber cloth** • **For ceramics, hard metal, steel, grey cast iron, aluminum** • **High lifetime and stock removal** • **For use with diamond grain size: 15/9 µm** • **Fixation system: GALAXY X-Tap**	
92002564	5 Pcs.	Alpha	250 mm
92002573	5 Pcs.	Alpha	300 mm
		BETA – Polishing cloth • **Suitable for pre-polishing** • **Hard synthetic cloth** • **Materials with high hardness, steel, grey cast iron, hard metal, ceramics** • **For use with diamond grain size: 15/9/6 µm** • **Fixation system: GALAXY X-Tap**	
95006572	5 Pcs.	Beta	250 mm
95006573	5 Pcs.	Beta	300 mm
		DELTA – Polishing cloth • **Suitable for pre- & intermediate polishing** • **Medium hard silk cloth** • **C-steels, precious metal, plastics [CFK, GFK], coatings, aluminum** • **For use with diamond grain size: 9/6/3 µm** • **Fixation system: GALAXY X-Tap**	
92008802	5 Pcs.	Delta	250 mm
92008803	5 Pcs.	Delta	300 mm

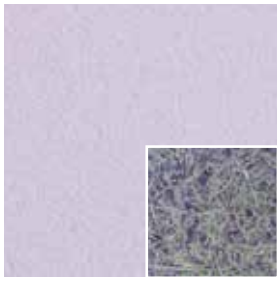
Item No.	Unit	Description	
		POLISHING CLOTHS, SELF-ADHESIVE	
		Description	**Ø**

GAMMA – Polishing cloth
- **Suitable for pre- & intermediate polishing**
- **Medium hard silk cloth**
- **C-steels, precious metal, coatings, plastics [CFK, GFK],**
- **For use with diamond grain size: 9/6/3 µm**
- **Fixation system: GALAXY X-Tap**

92002558	5 Pcs.	Gamma	200 mm
92002567	5 Pcs.	Gamma	250 mm
92002576	5 Pcs.	Gamma	300 mm

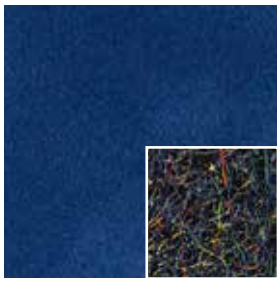
SIGMA – Polishing cloth
- **Suitable for pre- & intermediate polishing**
- **Soft wool cloth**
- **For all materials**
- **For use with diamond grain size: 6/3/1 µm**
- **Fixation system: GALAXY X-Tap**

92008810	5 Pcs.	Sigma	200 mm
92008811	5 Pcs.	Sigma	250 mm
92008812	5 Pcs.	Sigma	300 mm



IOTA – Polishing cloth
- **Suitable for end polishing as well as fine polishing with fine polishing suspension**
- **Long flocked, soft synthetic cloth**
- **for all materials, especially hard materials**
- **For use with diamond grain size: 3/1 µm**
- **Suitable for oxide suspensions**
- **Fixation system: GALAXY X-Tap**

95002393	5 Pcs.	Iota	200 mm
95002394	5 Pcs.	Iota	250 mm
95002395	5 Pcs.	Iota	300 mm

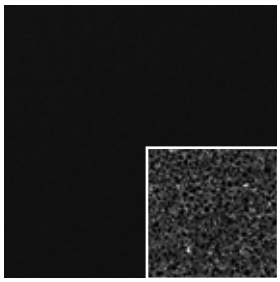


ZETA – Polishing cloth
- **Suitable for end polishing as well as fine polishing with fine polishing suspension**
- **Short flocked, soft synthetic cloth**
- **for all materials**
- **For use with diamond grain size: 3/1 µm**
- **Suitable for oxide suspensions as well as alumina**
- **Fixation system: GALAXY X-Tap**

92005681	5 Pcs.	Zeta	200 mm
92005683	5 Pcs.	Zeta	250 mm
92005684	5 Pcs.	Zeta	300 mm

KAPPA – Polishing cloth
- **Suitable for fine polishing with fine polishing suspension**
- **Soft polishing felt**
- **For all materials**
- **Suitable for alumina**
- **Fixation system: GALAXY X-Tap**

92002572	5 Pcs.	Kappa	250 mm
92002581	5 Pcs.	Kappa	300 mm



Item No.	Unit	Description
		POLISHING CLOTHS, SELF-ADHESIVE
		Description Ø
		OMEGA – Polishing cloth • **Suitable for fine polishing with fine polishing suspension** • **Soft synthetic cloth (chemical resistant)** • **For all materials** • **Suitable for oxide suspensions** • **Fixation system: GALAXY X-Tap**
92002562	5 Pcs.	Omega 200 mm
92002571	5 Pcs.	Omega 250 mm
92002580	5 Pcs.	Omega 300 mm
		all polishing cloths also available for Qpol 30 (Ø 30 mm)

NOTE: The Phi, Eta and Lambda polishing cloths are now only available in the GALAXY version!

PHI – Polishing cloth
- **Suitable for pre-, intermediate-, and end polishing**
- **Medium hard chemical fiber cloth**
- **For iron, non-ferrous metals, minerals, ceramics, composite materials**
- **For use with diamond grain size: 9/6/3/1 µm**

ETA – Polishing cloth
- **Suitable for end polishing**
- **Short flocked, medium hard synthetic cloth**
- **For all materials of medium and high hardness**
- **For use with diamond grain size: 3/1 µm**

LAMBDA – Polishing cloth
- **Suitable for fine polishing with fine polishing suspension**
- **Brushed, structured synthetic cloth (chemical resistant)**
- **For all materials**
- **Suitable for oxide suspensions as well as alumina**

Notes

Qprep Media carrier plate

During preparation using the Qpol 250 BOT, the grinding wheels/papers and polishing cloths are placed on a media carrier plate specially designed for the machine. Can be equipped with QPREP magnetic foil for use with QPREP GALAXY media.

PRODUCT ADVANTAGES

- Quick exchange/selection of grinding papers / polishing cloths possible due to up to 16 stored media carrier plates
- Secure fixing of the media carrier plate by means of vacuum suction (Vakujet)

RECOMMENDED APPLICATIONS

- Fully automatic preparation using Qpol 250 BOT

Item No.	Unit	Description
		MEDIA CARRIER PLATE
		Ø
		• **for grinding and polishing robot Qpol 250 BOT (SAPHIR X-Change)**
95005867	1 Pc.	250 mm

Notes

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Qprep Filter inserts for settling tank

During grinding and polishing, various fine residual materials are produced. These originate from the sample (chips), the grinding wheel (wear/abrasion) as well as parts of the polishing media. To avoid entering of the wastewater system and the pumps these residuals have to be filtered. Suitable filter fleeces with the correct mesh sizes in the sedimentation tank prevents damage to the machines and ensure a safe process.

Item No.	Unit	Description		
		FILTER INSERTS		
			Dimensions	**Mesh size**
		Filter inserts for settling tank (until year of construction 2012)		
95017310	5 Pcs.	Fleece	290 x 150 x 190 mm	40 µm
95017311	5 Pcs.	Fleece	290 x 150 x 190 mm	60 µm
		Filter inserts for settling tank (from year of construction 2013)		
95017312	5 Pcs.	Fleece	250 x 200 x 155 mm	60 µm
95017313	5 Pcs.	Fleece	250 x 200 x 155 mm	100 µm

Qprep Filter cartridges for Qpol 300 BOT

The Qpol 300 BOT grinding and polishing machine automates the entire preparation process, including cleaning the sample holders between preparation steps. The cleaning station is used for fully automatic, multi-stage cleaning of the sample with water, ultrasound and air and optionally with ethanol. The cleaning medium in the ultrasonic tank is cleaned using an integrated recirculating filter system. The filter cartridges of this recirculating filter system are interchangeable and available in different mesh sizes.

Item No.	Unit	Description			
		FILTER CARTRIDGES FOR QPOL 300 BOT			
		Filter fineness	**Height**	**Inner-Ø**	**Outer-Ø**
		Filter cartridge 5 µm for circulation filter system of the ultrasonic cleaning tank			
92007119	1 Pc.	5 µm	248 mm	28 mm	64 mm
		Filter cartridge 150 µm for circulation filter system of the ultrasonic cleaning tank			
92007120	1 Pc.	150 µm	248 mm	28 mm	62 mm

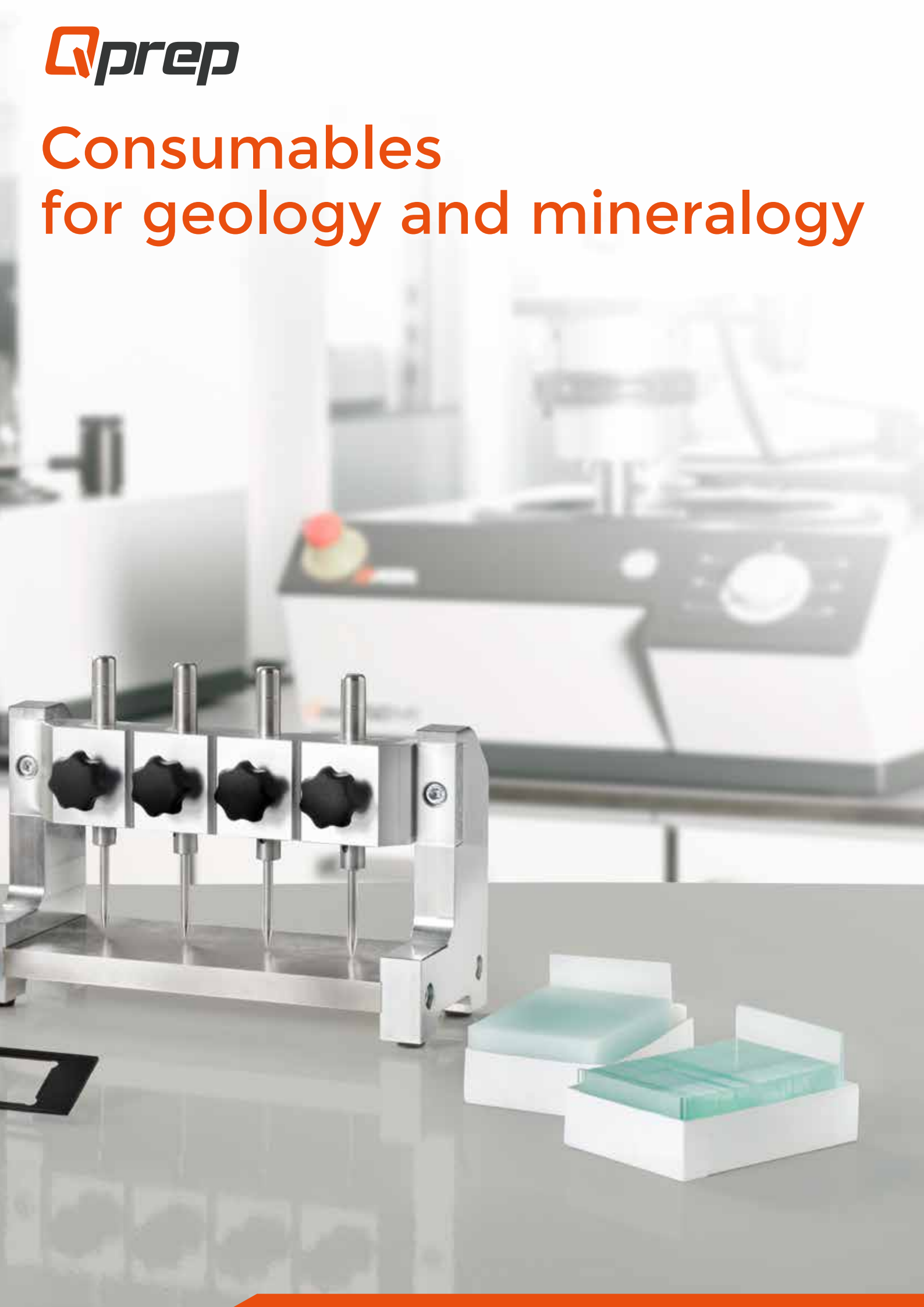
Notes

QATM®

MATERIALOGRAPHY & HARDNESS TESTING

Qprep

Consumables for geology and mineralogy



Qprep Geology and mineralogy

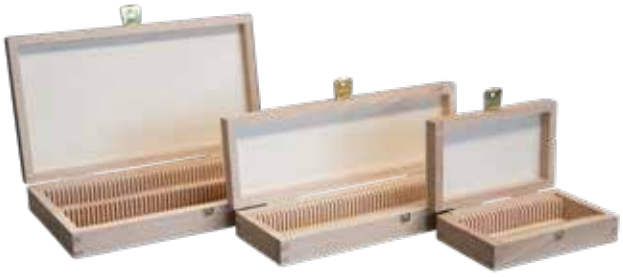
Materialographic sample preparation is an essential step in the qualitative and quantitative analysis of geological and mineralogical samples. Whether you want to analyze rocks, ores, minerals or fossils, you need a reliable and precise method to cut, mount, grind and polish your samples.

With QATM equipment and consumables, you can optimize this process and achieve high-quality results.

Item No.	Unit	Description
		ACCESSORIES FOR GEOLOGY AND MINERALOGY
		Description
		Bonding jig • **For fixing the thin sections on microscope slides and covering the samples with coverslips** • **Special pressure transducers for the simultaneous processing of four samples** • **For traditional mounting media and adhesives**
95017722	1 Pc.	Bonding jig

		Slides
95017713	50 Pcs.	Slide 48x28 mm, cutted edges, clear
95017714	50 Pcs.	Slide 48x28 mm, ground edges, clear
95017715	50 Pcs.	Slide 48x28 mm, cutted edges, matted
95017716	50 Pcs.	Slide 48x28 mm, ground edges, matted

		Coverslip
95017717	100 Pcs.	Coverslip 24x24 mm
95017718	100 Pcs.	Coverslip 24x40 mm



		Slide boxes • **For safe storage of 48x28 mm microscope slides, wood, sustainable and durable**
95017719	1 Pc.	Slide box for 25 slides, wood
95017720	1 Pc.	Slide box for 50 slides, wood
95017721	1 Pc.	Slide box for 100 slides, wood

Item No.	Unit	Description
		Cover medium • **For sticking and covering the samples, crystal clear covering medium**
95017723	100 ml	Cover medium, xylene free
		Holder for slides
95017724	1 Pc.	Hand sample holder for 48x28 mm slides cast aluminum, ergonomic working on manual grinding machines, 56x36x20 mm
95017725	1 Pc.	Holder for microscope slides 76x32 to 48x28 mm for microscopy, for the use of all microscope slides, 2.0 mm thick

(Z5446091)

(Z5651021)

		Sample holders
Z5446091	1 Pc.	Sample holder Geology, single pressure, incl. 3x sample holder insert 'Giessener format' 48x28 mm
Z5651021	1 Pc.	Sample holder Qpol Vibro for thin sections, 'Giessener format' 48x28 mm

Notes

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MATERIALOGRAPHY & HARDNESS TESTING

Consumables for etching and analyzing

Qprep Etching

QATM offers a wide range of etchants for contrasting as well as for qualitative and quantitative analysis of microstructures. Different QPREP etchants are available for macro and micro etching as well as electrolytic etching.

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**
92002680	1 Pc.	K1 - Part A, equals 1 litre in combination with Part B
92002980	1 Pc.	K1 - Part B (perchloric acid), equals 1 litre in combination with Part A
		Electrolyte for titanium
92003011	1 Pc.	T1 - Part A, equals 1 litre in combination with Part B
92003012	1 Pc.	T1 - Part B (perchloric acid), equals 1 litre in combination with Part A
		Electrolyte for grey iron
92003014	1 Pc.	F1 - Part A, equals 1 litre in combination with Part B
92003015	1 Pc.	F1 - Part B (perchloric acid), equals 1 litre in combination with Part A
		• Shipping of hazardous materials will be charged extra • Download of Safety Data Sheets at www.qatm.com
		ACCESSORIES FOR QETCH 100 M (KRISTALL 650)
		Description
		Electrolyte-bottle with screw top
95003955	1 Pc.	Volume 1 litre
		Accessories set for Qetch 100 M (Kristall 650) in suitcase
Z6201001	1 Pc.	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) • 10 pcs filter pads Ø 40.5 mm (Order No.: 95003985) • 1 pc dolphin clamp (Order No.: 82000374)

UP TO 40% FASTER THAN VISIPRO-I

Item No.	Unit	Description
		ETCHANTS
		Description
		Ready-to-use etching solutions for microstructural contrasting
95014346	500 ml	VisiPro-I Etchant for visualizing the former austenitic grain boundaries (for quenched or tempered low-alloy quenched and tempered steels and case-hardened steels)
95014347	1 l	VisiPro-I Etchant for visualizing the former austenitic grain boundaries (for quenched or tempered low-alloy quenched and tempered steels and case-hardened steels)
95017581	500 ml	VisiPro-I Fast etchant for visualization of former austenite grain boundaries on quenched and tempered unalloyed and low alloy steels through bearing steels (e.g. 102Cr6). Etching time: approximately 2 to 6 minutes, depending on the material.
95017582	1 l	VisiPro-I Fast etchant for visualization of former austenite grain boundaries on quenched and tempered unalloyed and low alloy steels through bearing steels (e.g. 102Cr6). Etching time: approximately 2 to 6 minutes, depending on the material.
95014348	500 ml	VisiPro-II Etchant for visualizing the former austenitic grain boundaries (for quenched or tempered low-alloy quenched, tempered case hardening steels and anti-friction bearing steels)
95014349	1 l	VisiPro-II Etchant for visualizing the former austenitic grain boundaries (for quenched or tempered low-alloy quenched, tempered case hardening steels and anti-friction bearing steels)
95006393	1 l	Barker reagent (for Aluminum grain boundaries)
95000508	500 ml	Copper A, chloride version (for Cu, Cu-alloys, brass and bronze)
92002602	1 kg	Adler Etchant (for steel, weldings, macro etching)
92002603	1 l	Alcoholic picric acid, 5% Picral (for steel, martensite)
92006878	1 l	Alcoholic Nitric Acid 5% Nital (for unalloyed and low alloyed steels)
92002597	1 l	Alcoholic nitric acid, 3% Nital (for unalloyed and low alloyed steels)
92002596	1 l	Alcoholic nitric acid, 1% Nital (for unalloyed and low alloyed steels)
92002605	1 kg	V2A etchant (for austenitic steels), applied at approximately 60°C, contains the additive Dr. Vogel's economy etchant, which acts as an inhibitor and optimizes etching performance.
92002678	1 kg	Sodium hydroxide solution (for aluminum alloys)
92004240	1 kg	Oberhoffer Etchant (for steel, segregations, flow-lines, macro/ micro etching)
92004492	1 kg	Kroll Etchant (for aluminum alloys, titanium)
92004222	1 kg	CU2 etching fluid (copper, copper with sulfide and oxide inclusions)
92002750	1 kg	Sodium picrate (for cementite detection in steel)
95002313	1 l	Kalling 1 Etchant (for martensitic stainless steel)
95002347	1 kg	Kalling 2 Etchant (for nickel, nickel alloys, stainless steels, nickel-copper alloys)
95002434	1 l	Color etching according to Klemm I (for low carbon steels), stock solution
95002390	20 g	Potassium bisulfite for Klemm I
95002435	1 l	Color etching according to Klemm II (copper, solder joints), stock solution
95002391	50 g	Potassium bislufite for Klemm II
95002436	1 l	Bechet-Beaujard Etchant, prior austenite grain boundaries
95002408	1 kg	Murakami Etchant (for hard metals, molybdenum/molybdenum alloys, chromium alloys, tungsten and tungsten alloys)

Download of Safety Data Sheets at www.qatm.com

Item No.	Unit	Description
		STORAGE BOTTLE FOR USED ETCHANT
		Description
95017528	1 l	Storage bottle for used etchant
		ACCESSORIES FOR ETCHING
		Description
		Etching bowl, DURAN® glass with cover, heat-resistant
92002629	1 Pc.	Ø 60/H 40 mm
92002628	1 Pc.	Ø 80/H 50 mm
92002430	1 Pc.	Ø 100/H 60 mm
92002626	1 Pc.	Ø 150/H 80 mm
		Etching bowl, polyethylene (PE), with lid
95012078	1 Pc.	Ø 90/H 40mm
95012079	1 Pc.	Ø 110/H 55mm
95012080	1 Pc.	Ø 110/H 75mm
		Etching bowl, polypropylene (PP), with screw coupling
95012081	1 Pc.	Ø 60/H 60mm
95012082	1 Pc.	Ø 115/H 70mm
		Crucible tong
92002431	1 Pc.	Crucible tong, stainless
95008097	1 Pc.	Crucible tong, stainless with insulated handle

Notes

Qprep Analyzing

When analyzing samples, QPREP offers support for the correct analysis of samples via specialist literature, cleaning products, desiccator, personal protective equipment, and more equipment.

Item No.	Unit	Description
		LAB ACCESSORIES AND EQUIPMENT
		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 Pc.	Face protection shield, according to DIN EN 166 1 3 - S
		Protective laboratory apron, made of PVC, with neck and side bonds, clean edges, without fabrics
95004848	1 Pc.	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
		Protective gloves black, comply with standard EN 388, EN 374
95003208	1 Pair	Protective gloves black, comply with standard EN 388, EN 374, size L - high resistance to water-soluble chemicals - very durable
		Safety goggles conforms to EN 166, length-adjustable
92005963	1 Pc.	Safety goggles conforms to EN 166
		Mounting adhesive
92002779	100 g	Mounting adhesive 100 g, excellent bonding for metals and ceramics
		Cotton wool
92002630	200 g	Cotton wool
		Specimen cleaning wipes
92008773	100 Pcs.	Specimen cleaning wipes
		Sample protection laquer
92004428	300 ml	Sample protection laquer, spray (conservation of samples)
		Bottles
92008770	1 Pc.	Spray bottle, 250 ml
92002432	1 Pc.	Spray bottle, 500 ml
92004491	1 Pc.	Washing bottle with narrow neck, 500 ml
		Measuring cylinder
92004302	1 Pc.	Measuring cylinder, 50 ml
92004303	1 Pc.	Measuring cylinder, 100 ml

Item No.	Unit	Description
		SPECIMEN DRYING UNIT
		Description
		Specimen drying unit • **Hot air blower with push button** • **Frame made of HPL solid material** • **Stainless steel tray made of perforated sheet for placing specimens** • **With underlying water protection mat** • **Dimensions W x H x D: 350 x 670 x 370 mm**
A5810355	1 Pc.	Specimen drying unit for set up on table
A5810419	1 Pc.	Specimen drying unit, with wall bracket
		ULTRASONIC CLEANING DEVICES
		Description
		Ultrasonic cleaning device 100 **Interior approx. W x H x D: 240 x 140 x 100 mm, capacity: 3 liters** **HF power: 80 W, connection: 230 V/50 Hz (1 Ph/N/PE)**
92002613	1 Pc.	US 100, rotary knob operation
92008794	1 Pc.	DT 100, digital push-button operation
92002609	1 Pc.	Perforated hanging basket
92002632	1 Pc.	Lid VA
		Ultrasonic cleaning device 106 **Internal diameter/height: 240/130 mm, capacity: 5.6 liters** **HF power: 120 W, connection: 230 V/50 Hz (1 Ph/N/PE)**
92005839	1 Pc.	US 106, rotary knob operation
95001285	1 Pc.	DT 106, digital push-button operation
92005840	1 Pc.	Perforated hanging basket
92005841	1 Pc.	Lid VA
		Additional ultrasonic cleaning devices available upon request
		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	1 l	Tickopur R 33
		CLEANING AIDS
		Description
		• **individually applicable for intensive cleaning**
95004662	1 l	Ethanol, 99% denatured
95004663	5 l	Ethanol, 99% denatured
95004664	10 l	Ethanol, 99% denatured
92004510	1 l	Aceton, chemically pure, for degreasing of sample surfaces
		PANE CLEANING FOR FUME CUPBOARD
		Description
		Pane cleaning set in suitcase
Z7510002	1 Pc.	• Pane wiper magnet • 2x 30 pcs. cleaning cloths

Item No.	Unit	Description
		ELEKTROGRAVIERGERÄT
		Description
95006339	1 Pc.	Electric engraving device for marking metal, glass, and plastic with 6 different tips
Z5690032	1 Pc.	Replacement tip set
		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 Pc.	Dosing gun
92008692	48 Pcs.	Mixing tube
		ASSEMBLY CLEANER
		Description
		for sample preparation, for replication set, in spray can
92004376	500 ml	Assembly cleaner spray
		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
		ACCESSORIES FOR MICROSCOPY
		Description
		Supporting accessories
92004109	1 kg	Plasticine
92002943	5 Pcs.	Microscope slides, metal, 76x26 mm
92004243	100 Pcs.	Microscope slides, glas, 32x24 mm
92004256	100 Pcs.	Microscope slides, glas, 40x24 mm
M1321000	1 Pc.	Specimen press • for parallel fixation of specimen on microscope slide • comfortable operation with minimal effort • compact, robust and durable • made of aluminum with anodised surface

Desiccator cabinet
(95012025)

Item No.	Unit	Description
		STORAGE OF SAMPLES
		Description
		Storage systems for readily prepared samples
92002898	1 Pc.	Disc cabinet 320 x 320 mm, for discs Ø 300 mm with 6 drawers
92002717	1 Pc.	Disc cabinet, 290 x 290 mm, for discs Ø 200 and 250 mm with 5 drawers
95012025	1 Pc.	Desiccator cabinet 310 x 525 x 375 mm
95012026	1 Pc.	Shelf for desiccator cabinet
92002868	1 kg	KC-drying pearls, for use with desiccator
A7500417	1 Pc.	Sample box, 320 x 320 x 58 mm for 56 Samples Ø 25-32 mm
A7500418	1 Pc.	Sample box, 320 x 320 x 58 mm for 25 Samples Ø 38-50 mm

Notes

Item No.	Unit	Description
		LITERATURE
		Description
		Expert Guide Materialography/Metallography, QATM Academy
95016622	1 Pc.	Expert Guide Materialography/Metallography

Notes

QATM®

MATERIALOGRAPHY & HARDNESS TESTING

Consumables for hardness testing

Hardness test blocks

Calibrated and certified hardness test blocks are an important part of the hardness testing. QPREP hardness test blocks fulfill the requirements for testing according to following standards:

- **Rockwell**
  DIN EN ISO 6508-3 & ASTM E18
- **Brinell**
  DIN EN ISO 6506-3 & ASTM E10
- **Vickers**
  DIN EN ISO 6507-3 & ASTM E92
- **Knoop**
  DIN EN ISO 4545-3 & ASTM E92

These are essential for indirect calibration and periodic verification, as well as the results documentation.

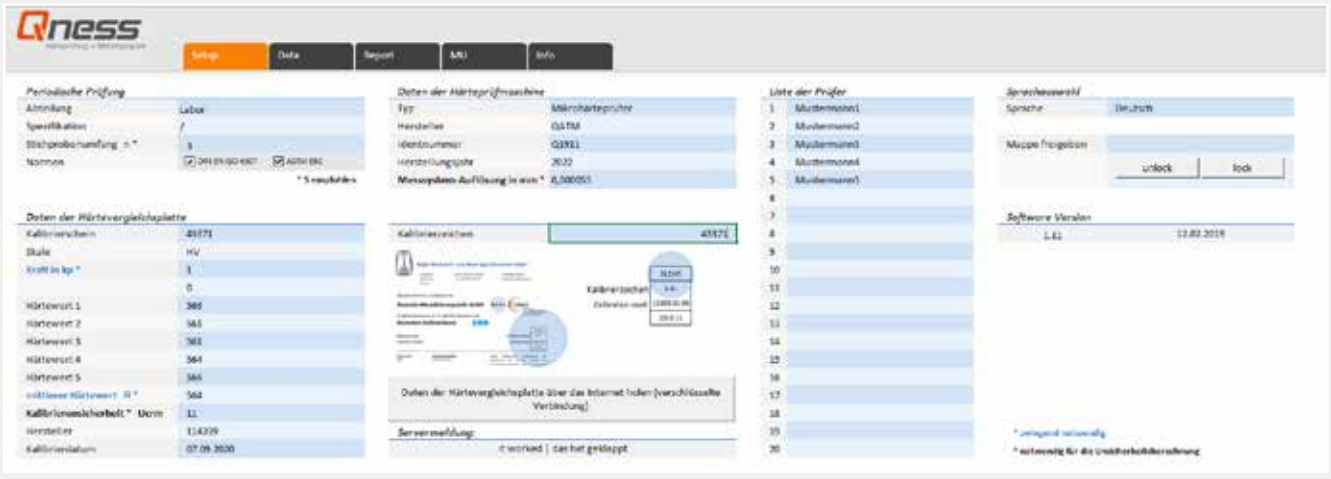
ADVANTAGES

- DAkkS calibration: according to current ISO and ASTM standards
- Permissible measurement deviation engraved
- Angular basic shape: optimal for automated periodic testing
- Easy data insertion into the documentation template
- Option: engraved grid lines (HHVP9999)
- Option: multiple calibrations (HHVP2021)

Item No.	Unit	Description
		Options
HHVP9999	1 PC.	Engraved grid lines
HHVP2021	1 Pc.	Multiple calibrations

DOCUMENTATION TEMPLATE

The documentation template supports in the periodic standard-compliance testing on hardness tester. Measurement accuracy is visualized to show the consistency of the measuring accuracy of the test method with the current standard. By using original QATM QPREP hardness test blocks, data could be called up online and the documentation template is filled automatically. A comprehensive range of statistical functions has also been built in. All results from the tests are clearly and logically documented and can be presented whenever there is an audit.



Qprep Hardness test blocks – Standard delivery program

We have put together a special range of hardness test blocks for you. The special advantage for you: **These plates are not only cheaper, but also available at short notice (up to max. 2 weeks)!**

	Item No.	Unit	Description				
			HARDNESS TEST BLOCKS - STANDARD DELIVERY PROGRAM				
					Material	**HW***	**Dimensions (mm)**
			Rockwell hardness test blocks				
STOCK	HR015N090C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 90	60x60x16
STOCK	HR030N067C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 67	60x60x16
STOCK	HR0HRA060C	1 Pc.	Rockwell	HRA	Steel	HW approx. 60	60x60x16
STOCK	HR0HRB086C	1 Pc.	Rockwell	HRB	Aluminum	HW approx. 86	60x60x16
STOCK	HR0HRC062C	1 Pc.	Rockwell	HRC	Steel	HW approx. 62	60x60x16
STOCK	HR0HRC046C	1 Pc.	Rockwell	HRC	Steel	HW approx. 46	60x60x16
			Brinell hardness test blocks				
STOCK	HB1030300A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 300	150x100x16
STOCK	HB2530250C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 250	60x60x16
			Vickers hardness test blocks				
STOCK	HVG300700E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 700	30x30x6
STOCK	HVG300500E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 500	30x30x6
STOCK	HVG500700E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 700	30x30x6
STOCK	HVG500500E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 500	30x30x6
STOCK	HVK001700E	1 Pc.	Vickers	HV 1	Steel	HW approx. 700	30x30x6
STOCK	HVK001500E	1 Pc.	Vickers	HV 1	Steel	HW approx. 500	30x30x6
STOCK	HVK010700C	1 Pc.	Vickers	HV 10	Steel	HW approx. 700	60x60x16
STOCK	HVK010550C	1 Pc.	Vickers	HV 10	Steel	HW approx. 550	60x60x16

HW* = Hardness value

Notes

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Qprep Hardness test blocks Rockwell

	Item No.	Unit	Description				
			HARDNESS TEST BLOCKS - ROCKWELL (DIN EN ISO 6508-3 & ASTM E18 CERTIFICATE)				
			HR		Material	HW*	Dimensions (mm)
			HRA				
	HR0HRA029C	1 Pc.	Rockwell	HRA	Aluminum	HW approx. 29	60x60x16
	HR0HRA040C	1 Pc.	Rockwell	HRA	Aluminum	HW approx. 40	60x60x16
	HR0HRA045C	1 Pc.	Rockwell	HRA	Aluminum	HW approx. 45	60x60x16
	HR0HRA053C	1 Pc.	Rockwell	HRA	Aluminum	HW approx. 53	60x60x16
	HR0HRA057C	1 Pc.	Rockwell	HRA	Steel	HW approx. 57	60x60x16
STOCK	HR0HRA060C	1 Pc.	Rockwell	HRA	Steel	HW approx. 60	60x60x16
	HR0HRA062C	1 Pc.	Rockwell	HRA	Steel	HW approx. 62	60x60x16
	HR0HRA066C	1 Pc.	Rockwell	HRA	Steel	HW approx. 66	60x60x16
	HR0HRA069C	1 Pc.	Rockwell	HRA	Steel	HW approx. 69	60x60x16
	HR0HRA071C	1 Pc.	Rockwell	HRA	Steel	HW approx. 71	60x60x16
	HR0HRA073C	1 Pc.	Rockwell	HRA	Steel	HW approx. 73	60x60x16
	HR0HRA075C	1 Pc.	Rockwell	HRA	Steel	HW approx. 75	60x60x16
	HR0HRA077C	1 Pc.	Rockwell	HRA	Steel	HW approx. 77	60x60x16
	HR0HRA079C	1 Pc.	Rockwell	HRA	Steel	HW approx. 79	60x60x16
	HR0HRA080C	1 Pc.	Rockwell	HRA	Steel	HW approx. 80	60x60x16
	HR0HRA081C	1 Pc.	Rockwell	HRA	Steel	HW approx. 81	60x60x16
	HR0HRA082C	1 Pc.	Rockwell	HRA	Steel	HW approx. 82	60x60x16
	HR0HRA083C	1 Pc.	Rockwell	HRA	Steel	HW approx. 83	60x60x16
	HR0HRA084C	1 Pc.	Rockwell	HRA	Steel	HW approx. 84	60x60x16
	HR0HRA085C	1 Pc.	Rockwell	HRA	Steel	HW approx. 85	60x60x16
			HRB				
	HR0HRB032C	1 Pc.	Rockwell	HRB	Aluminum	HW approx. 32	60x60x16
	HR0HRB060C	1 Pc.	Rockwell	HRB	Aluminum	HW approx. 60	60x60x16
	HR0HRB072C	1 Pc.	Rockwell	HRB	Aluminum	HW approx. 72	60x60x16
STOCK	HR0HRB086C	1 Pc.	Rockwell	HRB	Aluminum	HW approx. 86	60x60x16
	HR0HRB094C	1 Pc.	Rockwell	HRB	Steel	HW approx. 94	60x60x16
	HR0HRB098C	1 Pc.	Rockwell	HRB	Steel	HW approx. 98	60x60x16
			HRC				
	HR0HRC015C	1 Pc.	Rockwell	HRC	Steel	HW approx. 15	60x60x16
	HR0HRC019C	1 Pc.	Rockwell	HRC	Steel	HW approx. 19	60x60x16
	HR0HRC024C	1 Pc.	Rockwell	HRC	Steel	HW approx. 24	60x60x16
	HR0HRC031C	1 Pc.	Rockwell	HRC	Steel	HW approx. 31	60x60x16
	HR0HRC037C	1 Pc.	Rockwell	HRC	Steel	HW approx. 37	60x60x16
	HR0HRC041C	1 Pc.	Rockwell	HRC	Steel	HW approx. 41	60x60x16
STOCK	HR0HRC046C	1 Pc.	Rockwell	HRC	Steel	HW approx. 46	60x60x16
	HR0HRC049C	1 Pc.	Rockwell	HRC	Steel	HW approx. 49	60x60x16
	HR0HRC052C	1 Pc.	Rockwell	HRC	Steel	HW approx. 52	60x60x16
	HR0HRC055C	1 Pc.	Rockwell	HRC	Steel	HW approx. 55	60x60x16
	HR0HRC058C	1 Pc.	Rockwell	HRC	Steel	HW approx. 58	60x60x16
	HR0HRC060C	1 Pc.	Rockwell	HRC	Steel	HW approx. 60	60x60x16
STOCK	HR0HRC062C	1 Pc.	Rockwell	HRC	Steel	HW approx. 62	60x60x16
	HR0HRC063C	1 Pc.	Rockwell	HRC	Steel	HW approx. 63	60x60x16
	HR0HRC064C	1 Pc.	Rockwell	HRC	Steel	HW approx. 64	60x60x16
	HR0HRC065C	1 Pc.	Rockwell	HRC	Steel	HW approx. 65	60x60x16
	HR0HRC066C	1 Pc.	Rockwell	HRC	Steel	HW approx. 66	60x60x16
	HR0HRC068C	1 Pc.	Rockwell	HRC	Steel	HW approx. 68	60x60x16

HW* = Hardness value

	Item No.	Unit	Description	HR	Material	HW*	Dimensions (mm)
			HARDNESS TEST BLOCKS - ROCKWELL (DIN EN ISO 6508-3 & ASTM E18 CERTIFICATE)				
			HRD				
	HR0HRD045C	1 Pc.	Rockwell	HRD	Aluminum	HW approx. 45	60x60x16
	HR0HRD059C	1 Pc.	Rockwell	HRD	Aluminum	HW approx. 59	60x60x16
	HR0HRD065C	1 Pc.	Rockwell	HRD	Steel	HW approx. 65	60x60x16
	HR0HRD069C	1 Pc.	Rockwell	HRD	Steel	HW approx. 69	60x60x16
	HR0HRD072C	1 Pc.	Rockwell	HRD	Steel	HW approx. 72	60x60x16
			HRE				
	HR0HRE088C	1 Pc.	Rockwell	HRE	Aluminum	HW approx. 88	60x60x16
	HR0HRE100C	1 Pc.	Rockwell	HRE	Aluminum	HW approx. 100	60x60x16
			HRF				
	HR0HRF077C	1 Pc.	Rockwell	HRF	Aluminum	HW approx. 77	60x60x16
	HR0HRF092C	1 Pc.	Rockwell	HRF	Aluminum	HW approx. 92	60x60x16
	HR0HRF098C	1 Pc.	Rockwell	HRF	Aluminum	HW approx. 98	60x60x16
			HR15N				
	HR015N070C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 70	60x60x16
	HR015N075C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 75	60x60x16
	HR015N078C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 78	60x60x16
	HR015N081C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 81	60x60x16
	HR015N083C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 83	60x60x16
	HR015N085C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 85	60x60x16
	HR015N086C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 86	60x60x16
	HR015N088C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 88	60x60x16
	HR015N089C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 89	60x60x16
STOCK	HR015N090C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 90	60x60x16
	HR015N091C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 91	60x60x16
	HR015N092C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 92	60x60x16
	HR015N093C	1 Pc.	Rockwell	HR15N	Steel	HW approx. 93	60x60x16
			HR15T				
	HR015T072C	1 Pc.	Rockwell	HR15T	Aluminum	HW approx. 72	60x60x16
	HR015T080C	1 Pc.	Rockwell	HR15T	Aluminum	HW approx. 80	60x60x16
	HR015T084C	1 Pc.	Rockwell	HR15T	Aluminum	HW approx. 84	60x60x16
	HR015T088C	1 Pc.	Rockwell	HR15T	Aluminum	HW approx. 88	60x60x16
	HR015T090C	1 Pc.	Rockwell	HR15T	Steel	HW approx. 90	60x60x16
	HR015T091C	1 Pc.	Rockwell	HR15T	Steel	HW approx. 91	60x60x16
	HR015T092C	1 Pc.	Rockwell	HR15T	Steel	HW approx. 92	60x60x16
	HR015T094C	1 Pc.	Rockwell	HR15T	Steel	HW approx. 94	60x60x16

HW* = Hardness value

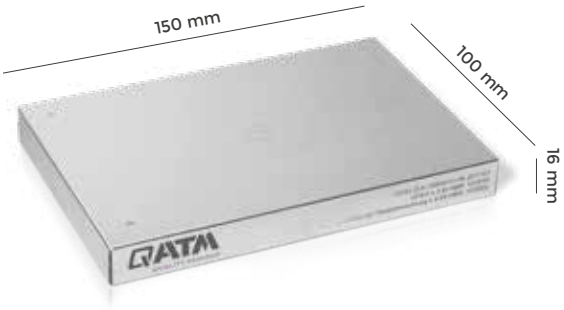
STOCK

HARDNESS TEST BLOCKS - ROCKWELL (DIN EN ISO 6508-3 & ASTM E18 CERTIFICATE)

Item No.	Unit	Description	HR	Material	HW*	Dimensions (mm)
		HR30N				
HR030N043C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 43	60x60x16
HR030N050C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 50	60x60x16
HR030N056C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 56	60x60x16
HR030N060C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 60	60x60x16
HR030N064C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 64	60x60x16
HR030N067C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 67	60x60x16
HR030N070C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 70	60x60x16
HR030N073C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 73	60x60x16
HR030N075C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 75	60x60x16
HR030N077C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 77	60x60x16
HR030N079C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 79	60x60x16
HR030N080C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 80	60x60x16
HR030N081C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 81	60x60x16
HR030N082C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 82	60x60x16
HR030N083C	1 Pc.	Rockwell	HR30N	Steel	HW approx. 83	60x60x16
		HR30T				
HR030T040C	1 Pc.	Rockwell	HR30T	Aluminum	HW approx. 40	60x60x16
HR030T057C	1 Pc.	Rockwell	HR30T	Aluminum	HW approx. 57	60x60x16
HR030T064C	1 Pc.	Rockwell	HR30T	Aluminum	HW approx. 64	60x60x16
HR030T073C	1 Pc.	Rockwell	HR30T	Aluminum	HW approx. 73	60x60x16
HR030T077C	1 Pc.	Rockwell	HR30T	Steel	HW approx. 77	60x60x16
HR030T080C	1 Pc.	Rockwell	HR30T	Steel	HW approx. 80	60x60x16
HR030T082C	1 Pc.	Rockwell	HR30T	Steel	HW approx. 82	60x60x16
		HR45N				
HR045N023C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 23	60x60x16
HR045N031C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 31	60x60x16
HR045N039C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 39	60x60x16
HR045N044C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 44	60x60x16
HR045N049C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 49	60x60x16
HR045N054C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 54	60x60x16
HR045N057C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 57	60x60x16
HR045N060C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 60	60x60x16
HR045N063C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 63	60x60x16
HR045N066C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 66	60x60x16
HR045N068C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 68	60x60x16
HR045N069C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 69	60x60x16
HR045N071C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 71	60x60x16
HR045N072C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 72	60x60x16
HR045N073C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 73	60x60x16
HR045N074C	1 Pc.	Rockwell	HR45N	Steel	HW approx. 74	60x60x16
		HR45T				
HR045T009C	1 Pc.	Rockwell	HR45T	Aluminum	HW approx. 9	60x60x16
HR045T034C	1 Pc.	Rockwell	HR45T	Aluminum	HW approx. 34	60x60x16
HR045T045C	1 Pc.	Rockwell	HR45T	Aluminum	HW approx. 45	60x60x16
HR045T059C	1 Pc.	Rockwell	HR45T	Aluminum	HW approx. 59	60x60x16
HR045T065C	1 Pc.	Rockwell	HR45T	Steel	HW approx. 65	60x60x16
HR045T069C	1 Pc.	Rockwell	HR45T	Steel	HW approx. 69	60x60x16
HR045T072C	1 Pc.	Rockwell	HR45T	Steel	HW approx. 72	60x60x16

HW* = Hardness value

Qprep Hardness test blocks Brinell



	Item No.	Unit	Description				
			HARDNESS TEST BLOCKS - BRINELL (DIN EN ISO 6506-3 & ASTM E10 CERTIFICATE)				
				HBW	**Material**	**HW***	**Dimensions (mm)**
			HBW 10 / 500				
	HB1005080A	1 Pc.	Brinell	HBW 10/500	Aluminum	HW approx. 80	150x100x16
			HBW 10 / 1000				
	HB1010080A	1 Pc.	Brinell	HBW 10/1000	Aluminum	HW approx. 80	150x100x16
	HB1010110A	1 Pc.	Brinell	HBW 10/1000	Aluminum	HW approx. 110	150x100x16
	HB1010130A	1 Pc.	Brinell	HBW 10/1000	Aluminum	HW approx. 130	150x100x16
	HB1010170A	1 Pc.	Brinell	HBW 10/1000	Aluminum	HW approx. 170	150x100x16
	HB1010200A	1 Pc.	Brinell	HBW 10/1000	Steel	HW approx. 200	150x100x16
			HBW 10 / 1500				
	HB1015080A	1 Pc.	Brinell	HBW 10/1500	Aluminum	HW approx. 80	150x100x16
	HB1015110A	1 Pc.	Brinell	HBW 10/1500	Aluminum	HW approx. 110	150x100x16
	HB1015130A	1 Pc.	Brinell	HBW 10/1500	Aluminum	HW approx. 130	150x100x16
	HB1015170A	1 Pc.	Brinell	HBW 10/1500	Aluminum	HW approx. 170	150x100x16
	HB1015200A	1 Pc.	Brinell	HBW 10/1500	Steel	HW approx. 200	150x100x16
	HB1015250A	1 Pc.	Brinell	HBW 10/1500	Steel	HW approx. 250	150x100x16
	HB1015300A	1 Pc.	Brinell	HBW 10/1500	Steel	HW approx. 300	150x100x16
			HBW 10 / 3000				
	HB1030110A	1 Pc.	Brinell	HBW 10/3000	Aluminum	HW approx. 110	150x100x16
	HB1030130A	1 Pc.	Brinell	HBW 10/3000	Aluminum	HW approx. 130	150x100x16
	HB1030170A	1 Pc.	Brinell	HBW 10/3000	Aluminum	HW approx. 170	150x100x16
	HB1030200A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 200	150x100x16
	HB1030250A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 250	150x100x16
STOCK	HB1030300A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 300	150x100x16
	HB1030350A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 350	150x100x16
	HB1030400A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 400	150x100x16
	HB1030450A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 450	150x100x16
	HB1030500A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 500	150x100x16
	HB1030550A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 550	150x100x16
	HB1030600A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 600	150x100x16
	HB1030650A	1 Pc.	Brinell	HBW 10/3000	Steel	HW approx. 650	150x100x16
			HBW 5 / 125				
	HB0505080A	1 Pc.	Brinell	HBW 5/125	Aluminum	HW approx. 80	150x100x16

HW* = Hardness value

Item No.	Unit	Description				
		HARDNESS TEST BLOCKS - BRINELL (DIN EN ISO 6506-3 & ASTM E10 CERTIFICATE)				
			HBW	**Material**	**HW***	**Dimensions (mm)**
		HBW 5 / 250				
HB0510080A	1 Pc.	Brinell	HBW 5/250	Aluminum	HW approx. 80	150x100x16
HB0510110A	1 Pc.	Brinell	HBW 5/250	Aluminum	HW approx. 110	150x100x16
HB0510130A	1 Pc.	Brinell	HBW 5/250	Aluminum	HW approx. 130	150x100x16
HB0510170A	1 Pc.	Brinell	HBW 5/250	Aluminum	HW approx. 170	150x100x16
HB0510200A	1 Pc.	Brinell	HBW 5/250	Steel	HW approx. 200	150x100x16
		HBW 5 / 750				
HB0530110A	1 Pc.	Brinell	HBW 5/750	Aluminum	HW approx. 110	150x100x16
HB0530130A	1 Pc.	Brinell	HBW 5/750	Aluminum	HW approx. 130	150x100x16
HB0530170A	1 Pc.	Brinell	HBW 5/750	Aluminum	HW approx. 170	150x100x16
HB0530200A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 200	150x100x16
HB0530250A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 250	150x100x16
HB0530300A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 300	150x100x16
HB0530350A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 350	150x100x16
HB0530400A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 400	150x100x16
HB0530450A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 450	150x100x16
HB0530500A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 500	150x100x16
HB0530550A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 550	150x100x16
HB0530600A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 600	150x100x16
HB0530650A	1 Pc.	Brinell	HBW 5/750	Steel	HW approx. 650	150x100x16
		HBW 2.5 / 31.25				
HB2505080C	1 Pc.	Brinell	HBW 2.5/31.25	Aluminum	HW approx. 80	60x60x16
		HBW 2.5 / 62.5				
HB2510080C	1 Pc.	Brinell	HBW 2.5/62.5	Aluminum	HW approx. 80	60x60x16
HB2510110C	1 Pc.	Brinell	HBW 2.5/62.5	Aluminum	HW approx. 110	60x60x16
HB2510130C	1 Pc.	Brinell	HBW 2.5/62.5	Aluminum	HW approx. 130	60x60x16
HB2510170C	1 Pc.	Brinell	HBW 2.5/62.5	Aluminum	HW approx. 170	60x60x16
HB2510200C	1 Pc.	Brinell	HBW 2.5/62.5	Steel	HW approx. 200	60x60x16
		HBW 2.5 / 187.5				
HB2530110C	1 Pc.	Brinell	HBW 2.5/187.5	Aluminum	HW approx. 110	60x60x16
HB2530130C	1 Pc.	Brinell	HBW 2.5/187.5	Aluminum	HW approx. 130	60x60x16
HB2530170C	1 Pc.	Brinell	HBW 2.5/187.5	Aluminum	HW approx. 170	60x60x16
HB2530200C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 200	60x60x16
STOCK HB2530250C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 250	60x60x16
HB2530300C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 300	60x60x16
HB2530350C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 350	60x60x16
HB2530400C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 400	60x60x16
HB2530450C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 450	60x60x16
HB2530500C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 500	60x60x16
HB2530550C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 550	60x60x16
HB2530600C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 600	60x60x16
HB2530650C	1 Pc.	Brinell	HBW 2.5/187.5	Steel	HW approx. 650	60x60x16

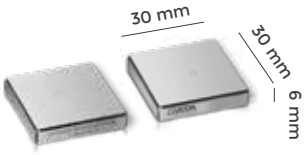
HW* = Hardness value

Item No.	Unit	Description				
		HARDNESS TEST BLOCKS - BRINELL (DIN EN ISO 6506-3 & ASTM E10 CERTIFICATE)				
			HBW	**Material**	**HW***	**Dimensions (mm)**
		HBW 1 / 5				
HB0105080C	1 Pc.	Brinell	HBW 1/5	Aluminum	HW approx. 80	60x60x16
		HBW 1 / 10				
HB0110080C	1 Pc.	Brinell	HBW 1/10	Aluminum	HW approx. 80	60x60x16
HB0110110C	1 Pc.	Brinell	HBW 1/10	Aluminum	HW approx. 110	60x60x16
HB0110130C	1 Pc.	Brinell	HBW 1/10	Aluminum	HW approx. 130	60x60x16
HB0110170C	1 Pc.	Brinell	HBW 1/10	Aluminum	HW approx. 170	60x60x16
HB0110200C	1 Pc.	Brinell	HBW 1/10	Steel	HW approx. 200	60x60x16
		HBW 1 / 30				
HB0130110C	1 Pc.	Brinell	HBW 1/30	Aluminum	HW approx. 110	60x60x16
HB0130130C	1 Pc.	Brinell	HBW 1/30	Aluminum	HW approx. 130	60x60x16
HB0130170C	1 Pc.	Brinell	HBW 1/30	Aluminum	HW approx. 170	60x60x16
HB0130200C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 200	60x60x16
HB0130250C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 250	60x60x16
HB0130300C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 300	60x60x16
HB0130350C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 350	60x60x16
HB0130400C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 400	60x60x16
HB0130450C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 450	60x60x16
HB0130500C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 500	60x60x16
HB0130550C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 550	60x60x16
HB0130600C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 600	60x60x16
HB0130650C	1 Pc.	Brinell	HBW 1/30	Steel	HW approx. 650	60x60x16

Notes

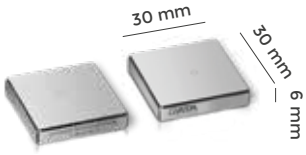
HW* = Hardness value

Qprep Hardness test blocks Vickers



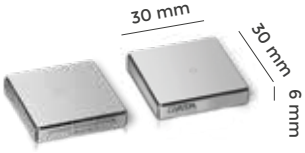
Item No.	Unit	Description				
		HARDNESS TEST BLOCKS - VICKERS (DIN EN ISO 6507-3 & ASTM E92 CERTIFICATE)				
			HV	Material	HW*	Dimensions (mm)
		HV 0.01				
HVG010200E	1 Pc.	Vickers	HV 0.010	Steel	HW approx. 200	30x30x6
		HV 0.015				
HVG015200E	1 Pc.	Vickers	HV 0.015	Steel	HW approx. 200	30x30x6
HVG015250E	1 Pc.	Vickers	HV 0.015	Steel	HW approx. 250	30x30x6
		HV 0.02				
HVG020200E	1 Pc.	Vickers	HV 0.02	Steel	HW approx. 200	30x30x6
HVG020250E	1 Pc.	Vickers	HV 0.02	Steel	HW approx. 250	30x30x6
HVG020300E	1 Pc.	Vickers	HV 0.02	Steel	HW approx. 300	30x30x6
		HV 0.025				
HVG025200E	1 Pc.	Vickers	HV 0.025	Steel	HW approx. 200	30x30x6
HVG025250E	1 Pc.	Vickers	HV 0.025	Steel	HW approx. 250	30x30x6
HVG025300E	1 Pc.	Vickers	HV 0.025	Steel	HW approx. 300	30x30x6
		HV 0.05				
HVG050200E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 200	30x30x6
HVG050250E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 250	30x30x6
HVG050300E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 300	30x30x6
HVG050350E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 350	30x30x6
HVG050400E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 400	30x30x6
HVG050450E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 450	30x30x6
HVG050500E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 500	30x30x6
HVG050550E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 550	30x30x6
HVG050600E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 600	30x30x6
HVG050650E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 650	30x30x6
HVG050700E	1 Pc.	Vickers	HV 0.05	Steel	HW approx. 700	30x30x6

HW* = Hardness value



	Item No.	Unit	Description				
			HARDNESS TEST BLOCKS - VICKERS (DIN EN ISO 6507-3 & ASTM E92 CERTIFICATE)				
				HV	**Material**	**HW***	**Dimensions (mm)**
			HV 0.1				
	HVG100200E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 200	30x30x6
	HVG100250E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 250	30x30x6
	HVG100300E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 300	30x30x6
	HVG100350E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 350	30x30x6
	HVG100400E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 400	30x30x6
	HVG100450E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 450	30x30x6
	HVG100500E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 500	30x30x6
	HVG100550E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 550	30x30x6
	HVG100600E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 600	30x30x6
	HVG100650E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 650	30x30x6
	HVG100700E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 700	30x30x6
	HVG100750E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 750	30x30x6
	HVG100800E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 800	30x30x6
	HVG100850E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 850	30x30x6
	HVG100900E	1 Pc.	Vickers	HV 0.1	Steel	HW approx. 900	30x30x6
			HV 0.2				
	HVG200200E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 200	30x30x6
	HVG200250E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 250	30x30x6
	HVG200300E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 300	30x30x6
	HVG200350E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 350	30x30x6
	HVG200400E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 400	30x30x6
	HVG200450E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 450	30x30x6
	HVG200500E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 500	30x30x6
	HVG200550E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 550	30x30x6
	HVG200600E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 600	30x30x6
	HVG200650E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 650	30x30x6
	HVG200700E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 700	30x30x6
	HVG200750E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 750	30x30x6
	HVG200800E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 800	30x30x6
	HVG200850E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 850	30x30x6
	HVG200900E	1 Pc.	Vickers	HV 0.2	Steel	HW approx. 900	30x30x6
			HV 0.3				
	HVG300200E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 200	30x30x6
	HVG300250E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 250	30x30x6
	HVG300300E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 300	30x30x6
	HVG300350E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 350	30x30x6
	HVG300400E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 400	30x30x6
	HVG300450E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 450	30x30x6
STOCK	HVG300500E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 500	30x30x6
	HVG300550E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 550	30x30x6
	HVG300600E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 600	30x30x6
	HVG300650E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 650	30x30x6
STOCK	HVG300700E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 700	30x30x6
	HVG300750E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 750	30x30x6
	HVG300800E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 800	30x30x6
	HVG300850E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 850	30x30x6
	HVG300900E	1 Pc.	Vickers	HV 0.3	Steel	HW approx. 900	30x30x6

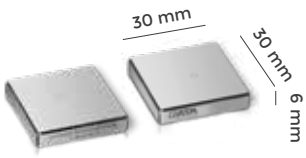
HW* = Hardness value

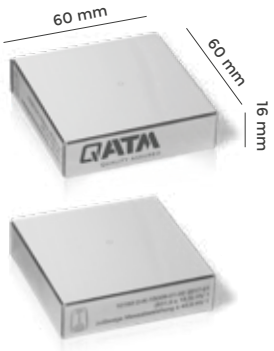


HARDNESS TEST BLOCKS - VICKERS (DIN EN ISO 6507-3 & ASTM E92 CERTIFICATE)

	Item No.	Unit	Description	HV	Material	HW*	Dimensions (mm)
			HV 0.5				
	HVG500200E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 200	30x30x6
	HVG500250E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 250	30x30x6
	HVG500300E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 300	30x30x6
	HVG500350E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 350	30x30x6
	HVG500400E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 400	30x30x6
	HVG500450E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 450	30x30x6
STOCK	HVG500500E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 500	30x30x6
	HVG500550E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 550	30x30x6
	HVG500600E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 600	30x30x6
	HVG500650E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 650	30x30x6
STOCK	HVG500700E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 700	30x30x6
	HVG500750E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 750	30x30x6
	HVG500800E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 800	30x30x6
	HVG500850E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 850	30x30x6
	HVG500900E	1 Pc.	Vickers	HV 0.5	Steel	HW approx. 900	30x30x6
			HV 1				
	HVK001200E	1 Pc.	Vickers	HV 1	Steel	HW approx. 200	30x30x6
	HVK001250E	1 Pc.	Vickers	HV 1	Steel	HW approx. 250	30x30x6
	HVK001300E	1 Pc.	Vickers	HV 1	Steel	HW approx. 300	30x30x6
	HVK001350E	1 Pc.	Vickers	HV 1	Steel	HW approx. 350	30x30x6
	HVK001400E	1 Pc.	Vickers	HV 1	Steel	HW approx. 400	30x30x6
	HVK001450E	1 Pc.	Vickers	HV 1	Steel	HW approx. 450	30x30x6
STOCK	HVK001500E	1 Pc.	Vickers	HV 1	Steel	HW approx. 500	30x30x6
	HVK001550E	1 Pc.	Vickers	HV 1	Steel	HW approx. 550	30x30x6
	HVK001600E	1 Pc.	Vickers	HV 1	Steel	HW approx. 600	30x30x6
	HVK001650E	1 Pc.	Vickers	HV 1	Steel	HW approx. 650	30x30x6
STOCK	HVK001700E	1 Pc.	Vickers	HV 1	Steel	HW approx. 700	30x30x6
	HVK001750E	1 Pc.	Vickers	HV 1	Steel	HW approx. 750	30x30x6
	HVK001800E	1 Pc.	Vickers	HV 1	Steel	HW approx. 800	30x30x6
	HVK001850E	1 Pc.	Vickers	HV 1	Steel	HW approx. 850	30x30x6
	HVK001900E	1 Pc.	Vickers	HV 1	Steel	HW approx. 900	30x30x6
			HV 1				
	HVK001080C	1 Pc.	Vickers	HV 1	Aluminum	HW approx. 80	60x60x16
	HVK001110C	1 Pc.	Vickers	HV 1	Aluminum	HW approx. 110	60x60x16
	HVK001130C	1 Pc.	Vickers	HV 1	Aluminum	HW approx. 130	60x60x16
	HVK001170C	1 Pc.	Vickers	HV 1	Aluminum	HW approx. 170	60x60x16
	HVK001200C	1 Pc.	Vickers	HV 1	Steel	HW approx. 200	60x60x16
	HVK001250C	1 Pc.	Vickers	HV 1	Steel	HW approx. 250	60x60x16
	HVK001300C	1 Pc.	Vickers	HV 1	Steel	HW approx. 300	60x60x16
	HVK001350C	1 Pc.	Vickers	HV 1	Steel	HW approx. 350	60x60x16
	HVK001400C	1 Pc.	Vickers	HV 1	Steel	HW approx. 400	60x60x16
	HVK001450C	1 Pc.	Vickers	HV 1	Steel	HW approx. 450	60x60x16
	HVK001500C	1 Pc.	Vickers	HV 1	Steel	HW approx. 500	60x60x16
	HVK001550C	1 Pc.	Vickers	HV 1	Steel	HW approx. 550	60x60x16
	HVK001600C	1 Pc.	Vickers	HV 1	Steel	HW approx. 600	60x60x16
	HVK001650C	1 Pc.	Vickers	HV 1	Steel	HW approx. 650	60x60x16
	HVK001700C	1 Pc.	Vickers	HV 1	Steel	HW approx. 700	60x60x16
	HVK001750C	1 Pc.	Vickers	HV 1	Steel	HW approx. 750	60x60x16
	HVK001800C	1 Pc.	Vickers	HV 1	Steel	HW approx. 800	60x60x16
	HVK001850C	1 Pc.	Vickers	HV 1	Steel	HW approx. 850	60x60x16
	HVK001900C	1 Pc.	Vickers	HV 1	Steel	HW approx. 900	60x60x16

HW* = Hardness value





Item No.	Unit	Description				
		HARDNESS TEST BLOCKS - VICKERS (DIN EN ISO 6507-3 & ASTM E92 CERTIFICATE)				
			HV	**Material**	**HW***	**Dimensions (mm)**
		HV 2				
HVK002200E	1 Pc.	Vickers	HV 2	Steel	HW approx. 200	30x30x6
HVK002250E	1 Pc.	Vickers	HV 2	Steel	HW approx. 250	30x30x6
HVK002300E	1 Pc.	Vickers	HV 2	Steel	HW approx. 300	30x30x6
HVK002350E	1 Pc.	Vickers	HV 2	Steel	HW approx. 350	30x30x6
HVK002400E	1 Pc.	Vickers	HV 2	Steel	HW approx. 400	30x30x6
HVK002450E	1 Pc.	Vickers	HV 2	Steel	HW approx. 450	30x30x6
HVK002500E	1 Pc.	Vickers	HV 2	Steel	HW approx. 500	30x30x6
HVK002550E	1 Pc.	Vickers	HV 2	Steel	HW approx. 550	30x30x6
HVK002600E	1 Pc.	Vickers	HV 2	Steel	HW approx. 600	30x30x6
HVK002650E	1 Pc.	Vickers	HV 2	Steel	HW approx. 650	30x30x6
HVK002700E	1 Pc.	Vickers	HV 2	Steel	HW approx. 700	30x30x6
HVK002750E	1 Pc.	Vickers	HV 2	Steel	HW approx. 750	30x30x6
HVK002800E	1 Pc.	Vickers	HV 2	Steel	HW approx. 800	30x30x6
HVK002850E	1 Pc.	Vickers	HV 2	Steel	HW approx. 850	30x30x6
HVK002900E	1 Pc.	Vickers	HV 2	Steel	HW approx. 900	30x30x6
		HV 2				
HVK002080C	1 Pc.	Vickers	HV 2	Aluminum	HW approx. 80	60x60x16
HVK002110C	1 Pc.	Vickers	HV 2	Aluminum	HW approx. 110	60x60x16
HVK002130C	1 Pc.	Vickers	HV 2	Aluminum	HW approx. 130	60x60x16
HVK002170C	1 Pc.	Vickers	HV 2	Aluminum	HW approx. 170	60x60x16
HVK002200C	1 Pc.	Vickers	HV 2	Steel	HW approx. 200	60x60x16
HVK002250C	1 Pc.	Vickers	HV 2	Steel	HW approx. 250	60x60x16
HVK002300C	1 Pc.	Vickers	HV 2	Steel	HW approx. 300	60x60x16
HVK002350C	1 Pc.	Vickers	HV 2	Steel	HW approx. 350	60x60x16
HVK002400C	1 Pc.	Vickers	HV 2	Steel	HW approx. 400	60x60x16
HVK002450C	1 Pc.	Vickers	HV 2	Steel	HW approx. 450	60x60x16
HVK002500C	1 Pc.	Vickers	HV 2	Steel	HW approx. 500	60x60x16
HVK002550C	1 Pc.	Vickers	HV 2	Steel	HW approx. 550	60x60x16
HVK002600C	1 Pc.	Vickers	HV 2	Steel	HW approx. 600	60x60x16
HVK002650C	1 Pc.	Vickers	HV 2	Steel	HW approx. 650	60x60x16
HVK002700C	1 Pc.	Vickers	HV 2	Steel	HW approx. 700	60x60x16
HVK002750C	1 Pc.	Vickers	HV 2	Steel	HW approx. 750	60x60x16
HVK002800C	1 Pc.	Vickers	HV 2	Steel	HW approx. 800	60x60x16
HVK002850C	1 Pc.	Vickers	HV 2	Steel	HW approx. 850	60x60x16
HVK002900C	1 Pc.	Vickers	HV 2	Steel	HW approx. 900	60x60x16

HW* = Hardness value

Item No.	Unit	Description				
		HARDNESS TEST BLOCKS - VICKERS (DIN EN ISO 6507-3 & ASTM E92 CERTIFICATE)				
			HV	**Material**	**HW***	**Dimensions (mm)**
		HV 3				
HVK003080C	1 Pc.	Vickers	HV 3	Aluminum	HW approx. 80	60x60x16
HVK003110C	1 Pc.	Vickers	HV 3	Aluminum	HW approx. 110	60x60x16
HVK003130C	1 Pc.	Vickers	HV 3	Aluminum	HW approx. 130	60x60x16
HVK003170C	1 Pc.	Vickers	HV 3	Aluminum	HW approx. 170	60x60x16
HVK003200C	1 Pc.	Vickers	HV 3	Steel	HW approx. 200	60x60x16
HVK003250C	1 Pc.	Vickers	HV 3	Steel	HW approx. 250	60x60x16
HVK003300C	1 Pc.	Vickers	HV 3	Steel	HW approx. 300	60x60x16
HVK003350C	1 Pc.	Vickers	HV 3	Steel	HW approx. 350	60x60x16
HVK003400C	1 Pc.	Vickers	HV 3	Steel	HW approx. 400	60x60x16
HVK003450C	1 Pc.	Vickers	HV 3	Steel	HW approx. 450	60x60x16
HVK003500C	1 Pc.	Vickers	HV 3	Steel	HW approx. 500	60x60x16
HVK003550C	1 Pc.	Vickers	HV 3	Steel	HW approx. 550	60x60x16
HVK003600C	1 Pc.	Vickers	HV 3	Steel	HW approx. 600	60x60x16
HVK003650C	1 Pc.	Vickers	HV 3	Steel	HW approx. 650	60x60x16
HVK003700C	1 Pc.	Vickers	HV 3	Steel	HW approx. 700	60x60x16
HVK003750C	1 Pc.	Vickers	HV 3	Steel	HW approx. 750	60x60x16
HVK003800C	1 Pc.	Vickers	HV 3	Steel	HW approx. 800	60x60x16
HVK003850C	1 Pc.	Vickers	HV 3	Steel	HW approx. 850	60x60x16
HVK003900C	1 Pc.	Vickers	HV 3	Steel	HW approx. 900	60x60x16
		HV 5				
HVK005080C	1 Pc.	Vickers	HV 5	Aluminum	HW approx. 80	60x60x16
HVK005110C	1 Pc.	Vickers	HV 5	Aluminum	HW approx. 110	60x60x16
HVK005130C	1 Pc.	Vickers	HV 5	Aluminum	HW approx. 130	60x60x16
HVK005170C	1 Pc.	Vickers	HV 5	Aluminum	HW approx. 170	60x60x16
HVK005200C	1 Pc.	Vickers	HV 5	Steel	HW approx. 200	60x60x16
HVK005250C	1 Pc.	Vickers	HV 5	Steel	HW approx. 250	60x60x16
HVK005300C	1 Pc.	Vickers	HV 5	Steel	HW approx. 300	60x60x16
HVK005350C	1 Pc.	Vickers	HV 5	Steel	HW approx. 350	60x60x16
HVK005400C	1 Pc.	Vickers	HV 5	Steel	HW approx. 400	60x60x16
HVK005450C	1 Pc.	Vickers	HV 5	Steel	HW approx. 450	60x60x16
HVK005500C	1 Pc.	Vickers	HV 5	Steel	HW approx. 500	60x60x16
HVK005550C	1 Pc.	Vickers	HV 5	Steel	HW approx. 550	60x60x16
HVK005600C	1 Pc.	Vickers	HV 5	Steel	HW approx. 600	60x60x16
HVK005650C	1 Pc.	Vickers	HV 5	Steel	HW approx. 650	60x60x16
HVK005700C	1 Pc.	Vickers	HV 5	Steel	HW approx. 700	60x60x16
HVK005750C	1 Pc.	Vickers	HV 5	Steel	HW approx. 750	60x60x16
HVK005800C	1 Pc.	Vickers	HV 5	Steel	HW approx. 800	60x60x16
HVK005850C	1 Pc.	Vickers	HV 5	Steel	HW approx. 850	60x60x16
HVK005900C	1 Pc.	Vickers	HV 5	Steel	HW approx. 900	60x60x16

HW* = Hardness value

HARDNESS TEST BLOCKS - VICKERS (DIN EN ISO 6507-3 & ASTM E92 CERTIFICATE)

	Item No.	Unit	Description	HV	Material	HW*	Dimensions (mm)
				HV 10			
	HVK010080C	1 Pc.	Vickers	HV 10	Aluminum	HW approx. 80	60x60x16
	HVK010110C	1 Pc.	Vickers	HV 10	Aluminum	HW approx. 110	60x60x16
	HVK010130C	1 Pc.	Vickers	HV 10	Aluminum	HW approx. 130	60x60x16
	HVK010170C	1 Pc.	Vickers	HV 10	Aluminum	HW approx. 170	60x60x16
	HVK010200C	1 Pc.	Vickers	HV 10	Steel	HW approx. 200	60x60x16
	HVK010250C	1 Pc.	Vickers	HV 10	Steel	HW approx. 250	60x60x16
	HVK010300C	1 Pc.	Vickers	HV 10	Steel	HW approx. 300	60x60x16
	HVK010350C	1 Pc.	Vickers	HV 10	Steel	HW approx. 350	60x60x16
	HVK010400C	1 Pc.	Vickers	HV 10	Steel	HW approx. 400	60x60x16
	HVK010450C	1 Pc.	Vickers	HV 10	Steel	HW approx. 450	60x60x16
	HVK010500C	1 Pc.	Vickers	HV 10	Steel	HW approx. 500	60x60x16
STOCK	HVK010550C	1 Pc.	Vickers	HV 10	Steel	HW approx. 550	60x60x16
	HVK010600C	1 Pc.	Vickers	HV 10	Steel	HW approx. 600	60x60x16
	HVK010650C	1 Pc.	Vickers	HV 10	Steel	HW approx. 650	60x60x16
STOCK	HVK010700C	1 Pc.	Vickers	HV 10	Steel	HW approx. 700	60x60x16
	HVK010750C	1 Pc.	Vickers	HV 10	Steel	HW approx. 750	60x60x16
	HVK010800C	1 Pc.	Vickers	HV 10	Steel	HW approx. 800	60x60x16
	HVK010850C	1 Pc.	Vickers	HV 10	Steel	HW approx. 850	60x60x16
	HVK010900C	1 Pc.	Vickers	HV 10	Steel	HW approx. 900	60x60x16
				HV 20			
	HVK020080C	1 Pc.	Vickers	HV 20	Aluminum	HW approx. 80	60x60x16
	HVK020110C	1 Pc.	Vickers	HV 20	Aluminum	HW approx. 110	60x60x16
	HVK020130C	1 Pc.	Vickers	HV 20	Aluminum	HW approx. 130	60x60x16
	HVK020170C	1 Pc.	Vickers	HV 20	Aluminum	HW approx. 170	60x60x16
	HVK020200C	1 Pc.	Vickers	HV 20	Steel	HW approx. 200	60x60x16
	HVK020250C	1 Pc.	Vickers	HV 20	Steel	HW approx. 250	60x60x16
	HVK020300C	1 Pc.	Vickers	HV 20	Steel	HW approx. 300	60x60x16
	HVK020350C	1 Pc.	Vickers	HV 20	Steel	HW approx. 350	60x60x16
	HVK020400C	1 Pc.	Vickers	HV 20	Steel	HW approx. 400	60x60x16
	HVK020450C	1 Pc.	Vickers	HV 20	Steel	HW approx. 450	60x60x16
	HVK020500C	1 Pc.	Vickers	HV 20	Steel	HW approx. 500	60x60x16
	HVK020550C	1 Pc.	Vickers	HV 20	Steel	HW approx. 550	60x60x16
	HVK020600C	1 Pc.	Vickers	HV 20	Steel	HW approx. 600	60x60x16
	HVK020650C	1 Pc.	Vickers	HV 20	Steel	HW approx. 650	60x60x16
	HVK020700C	1 Pc.	Vickers	HV 20	Steel	HW approx. 700	60x60x16
	HVK020750C	1 Pc.	Vickers	HV 20	Steel	HW approx. 750	60x60x16
	HVK020800C	1 Pc.	Vickers	HV 20	Steel	HW approx. 800	60x60x16
	HVK020850C	1 Pc.	Vickers	HV 20	Steel	HW approx. 850	60x60x16
	HVK020900C	1 Pc.	Vickers	HV 20	Steel	HW approx. 900	60x60x16

HW* = Hardness value

Item No.	Unit	Description				
		HARDNESS TEST BLOCKS - VICKERS (DIN EN ISO 6507-3 & ASTM E92 CERTIFICATE)				
			HV	**Material**	**HW***	**Dimensions (mm)**
		HV 30				
HVK030080C	1 Pc.	Vickers	HV 30	Aluminum	HW approx. 80	60x60x16
HVK030110C	1 Pc.	Vickers	HV 30	Aluminum	HW approx. 110	60x60x16
HVK030130C	1 Pc.	Vickers	HV 30	Aluminum	HW approx. 130	60x60x16
HVK030170C	1 Pc.	Vickers	HV 30	Aluminum	HW approx. 170	60x60x16
HVK030200C	1 Pc.	Vickers	HV 30	Steel	HW approx. 200	60x60x16
HVK030250C	1 Pc.	Vickers	HV 30	Steel	HW approx. 250	60x60x16
HVK030300C	1 Pc.	Vickers	HV 30	Steel	HW approx. 300	60x60x16
HVK030350C	1 Pc.	Vickers	HV 30	Steel	HW approx. 350	60x60x16
HVK030400C	1 Pc.	Vickers	HV 30	Steel	HW approx. 400	60x60x16
HVK030450C	1 Pc.	Vickers	HV 30	Steel	HW approx. 450	60x60x16
HVK030500C	1 Pc.	Vickers	HV 30	Steel	HW approx. 500	60x60x16
HVK030550C	1 Pc.	Vickers	HV 30	Steel	HW approx. 550	60x60x16
HVK030600C	1 Pc.	Vickers	HV 30	Steel	HW approx. 600	60x60x16
HVK030650C	1 Pc.	Vickers	HV 30	Steel	HW approx. 650	60x60x16
HVK030700C	1 Pc.	Vickers	HV 30	Steel	HW approx. 700	60x60x16
HVK030750C	1 Pc.	Vickers	HV 30	Steel	HW approx. 750	60x60x16
HVK030800C	1 Pc.	Vickers	HV 30	Steel	HW approx. 800	60x60x16
HVK030850C	1 Pc.	Vickers	HV 30	Steel	HW approx. 850	60x60x16
HVK030900C	1 Pc.	Vickers	HV 30	Steel	HW approx. 900	60x60x16
		HV 50				
HVK050080C	1 Pc.	Vickers	HV 50	Aluminum	HW approx. 80	60x60x16
HVK050110C	1 Pc.	Vickers	HV 50	Aluminum	HW approx. 110	60x60x16
HVK050130C	1 Pc.	Vickers	HV 50	Aluminum	HW approx. 130	60x60x16
HVK050170C	1 Pc.	Vickers	HV 50	Aluminum	HW approx. 170	60x60x16
HVK050200C	1 Pc.	Vickers	HV 50	Steel	HW approx. 200	60x60x16
HVK050250C	1 Pc.	Vickers	HV 50	Steel	HW approx. 250	60x60x16
HVK050300C	1 Pc.	Vickers	HV 50	Steel	HW approx. 300	60x60x16
HVK050350C	1 Pc.	Vickers	HV 50	Steel	HW approx. 350	60x60x16
HVK050400C	1 Pc.	Vickers	HV 50	Steel	HW approx. 400	60x60x16
HVK050450C	1 Pc.	Vickers	HV 50	Steel	HW approx. 450	60x60x16
HVK050500C	1 Pc.	Vickers	HV 50	Steel	HW approx. 500	60x60x16
HVK050550C	1 Pc.	Vickers	HV 50	Steel	HW approx. 550	60x60x16
HVK050600C	1 Pc.	Vickers	HV 50	Steel	HW approx. 600	60x60x16
HVK050650C	1 Pc.	Vickers	HV 50	Steel	HW approx. 650	60x60x16
HVK050700C	1 Pc.	Vickers	HV 50	Steel	HW approx. 700	60x60x16
HVK050750C	1 Pc.	Vickers	HV 50	Steel	HW approx. 750	60x60x16
HVK050800C	1 Pc.	Vickers	HV 50	Steel	HW approx. 800	60x60x16
HVK050850C	1 Pc.	Vickers	HV 50	Steel	HW approx. 850	60x60x16
HVK050900C	1 Pc.	Vickers	HV 50	Steel	HW approx. 900	60x60x16

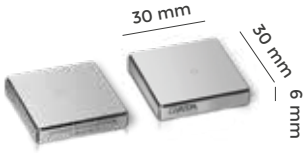
HW* = Hardness value

Item No.	Unit	Description				
		HARDNESS TEST BLOCKS - VICKERS (DIN EN ISO 6507-3 & ASTM E92 CERTIFICATE)				
			HV	**Material**	**HW***	**Dimensions (mm)**
		HV 100				
HVK100080C	1 Pc.	Vickers	HV 100	Aluminum	HW approx. 80	60x60x16
HVK100110C	1 Pc.	Vickers	HV 100	Aluminum	HW approx. 110	60x60x16
HVK100130C	1 Pc.	Vickers	HV 100	Aluminum	HW approx. 130	60x60x16
HVK100170C	1 Pc.	Vickers	HV 100	Aluminum	HW approx. 170	60x60x16
HVK100200C	1 Pc.	Vickers	HV 100	Steel	HW approx. 200	60x60x16
HVK100250C	1 Pc.	Vickers	HV 100	Steel	HW approx. 250	60x60x16
HVK100300C	1 Pc.	Vickers	HV 100	Steel	HW approx. 300	60x60x16
HVK100350C	1 Pc.	Vickers	HV 100	Steel	HW approx. 350	60x60x16
HVK100400C	1 Pc.	Vickers	HV 100	Steel	HW approx. 400	60x60x16
HVK100450C	1 Pc.	Vickers	HV 100	Steel	HW approx. 450	60x60x16
HVK100500C	1 Pc.	Vickers	HV 100	Steel	HW approx. 500	60x60x16
HVK100550C	1 Pc.	Vickers	HV 100	Steel	HW approx. 550	60x60x16
HVK100600C	1 Pc.	Vickers	HV 100	Steel	HW approx. 600	60x60x16
HVK100650C	1 Pc.	Vickers	HV 100	Steel	HW approx. 650	60x60x16
HVK100700C	1 Pc.	Vickers	HV 100	Steel	HW approx. 700	60x60x16
HVK100750C	1 Pc.	Vickers	HV 100	Steel	HW approx. 750	60x60x16
HVK100800C	1 Pc.	Vickers	HV 100	Steel	HW approx. 800	60x60x16
HVK100850C	1 Pc.	Vickers	HV 100	Steel	HW approx. 850	60x60x16
HVK100900C	1 Pc.	Vickers	HV 100	Steel	HW approx. 900	60x60x16

HW* = Hardness value

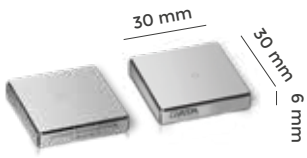
Notes

Qprep Hardness test blocks Knoop



Item No.	Unit	Description				
		HARDNESS TEST BLOCKS - KNOOP (DIN EN ISO 4545-3 & ASTM E92 CERTIFICATE)				
			HK	Material	HW*	Dimensions (mm)
			HK 0.01			
HKG010200E	1 Pc.	Knoop	HK 0.01	Steel	HW approx. 200	30x30x6
HKG010250E	1 Pc.	Knoop	HK 0.01	Steel	HW approx. 250	30x30x6
HKG010300E	1 Pc.	Knoop	HK 0.01	Steel	HW approx. 300	30x30x6
HKG010350E	1 Pc.	Knoop	HK 0.01	Steel	HW approx. 350	30x30x6
			HK 0.015			
HKG015200E	1 Pc.	Knoop	HK 0.015	Steel	HW approx. 200	30x30x6
HKG015250E	1 Pc.	Knoop	HK 0.015	Steel	HW approx. 250	30x30x6
HKG015300E	1 Pc.	Knoop	HK 0.015	Steel	HW approx. 300	30x30x6
HKG015350E	1 Pc.	Knoop	HK 0.015	Steel	HW approx. 350	30x30x6
HKG015400E	1 Pc.	Knoop	HK 0.015	Steel	HW approx. 400	30x30x6
HKG015450E	1 Pc.	Knoop	HK 0.015	Steel	HW approx. 450	30x30x6
HKG015500E	1 Pc.	Knoop	HK 0.015	Steel	HW approx. 500	30x30x6
			HK 0.02			
HKG020200E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 200	30x30x6
HKG020250E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 250	30x30x6
HKG020300E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 300	30x30x6
HKG020350E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 350	30x30x6
HKG020400E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 400	30x30x6
HKG020450E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 450	30x30x6
HKG020500E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 500	30x30x6
HKG020550E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 550	30x30x6
HKG020600E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 600	30x30x6
HKG020650E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 650	30x30x6
HKG020700E	1 Pc.	Knoop	HK 0.02	Steel	HW approx. 700	30x30x6
			HK 0.025			
HKG025200E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 200	30x30x6
HKG025250E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 250	30x30x6
HKG025300E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 300	30x30x6
HKG025350E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 350	30x30x6
HKG025400E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 400	30x30x6
HKG025450E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 450	30x30x6
HKG025500E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 500	30x30x6
HKG025550E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 550	30x30x6
HKG025600E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 600	30x30x6
HKG025650E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 650	30x30x6
HKG025700E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 700	30x30x6
HKG025750E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 750	30x30x6
HKG025800E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 800	30x30x6
HKG025850E	1 Pc.	Knoop	HK 0.025	Steel	HW approx. 850	30x30x6

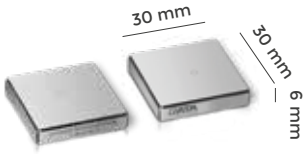
HW* = Hardness value



HARDNESS TEST BLOCKS - KNOOP (DIN EN ISO 4545-3 & ASTM E92 CERTIFICATE)

Item No.	Unit	Description	HK	Material	HW*	Dimensions (mm)
			HK 0.05			
HKG050200E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 200	30x30x6
HKG050250E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 250	30x30x6
HKG050300E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 300	30x30x6
HKG050350E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 350	30x30x6
HKG050400E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 400	30x30x6
HKG050450E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 450	30x30x6
HKG050500E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 500	30x30x6
HKG050550E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 550	30x30x6
HKG050600E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 600	30x30x6
HKG050650E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 650	30x30x6
HKG050700E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 700	30x30x6
HKG050750E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 750	30x30x6
HKG050800E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 800	30x30x6
HKG050850E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 850	30x30x6
HKG050900E	1 Pc.	Knoop	HK 0.05	Steel	HW approx. 900	30x30x6
			HK 0.1			
HKG100200E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 200	30x30x6
HKG100250E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 250	30x30x6
HKG100300E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 300	30x30x6
HKG100350E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 350	30x30x6
HKG100400E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 400	30x30x6
HKG100450E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 450	30x30x6
HKG100500E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 500	30x30x6
HKG100550E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 550	30x30x6
HKG100600E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 600	30x30x6
HKG100650E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 650	30x30x6
HKG100700E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 700	30x30x6
HKG100750E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 750	30x30x6
HKG100800E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 800	30x30x6
HKG100850E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 850	30x30x6
HKG100900E	1 Pc.	Knoop	HK 0.1	Steel	HW approx. 900	30x30x6
			HK 0.2			
HKG200200E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 200	30x30x6
HKG200250E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 250	30x30x6
HKG200300E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 300	30x30x6
HKG200350E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 350	30x30x6
HKG200400E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 400	30x30x6
HKG200450E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 450	30x30x6
HKG200500E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 500	30x30x6
HKG200550E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 550	30x30x6
HKG200600E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 600	30x30x6
HKG200650E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 650	30x30x6
HKG200700E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 700	30x30x6
HKG200750E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 750	30x30x6
HKG200800E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 800	30x30x6
HKG200850E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 850	30x30x6
HKG200900E	1 Pc.	Knoop	HK 0.2	Steel	HW approx. 900	30x30x6

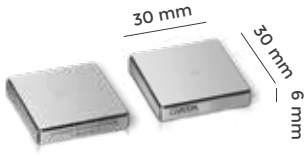
HW* = Hardness value



HARDNESS TEST BLOCKS - KNOOP (DIN EN ISO 4545-3 & ASTM E92 CERTIFICATE)

Item No.	Unit	Description	HK	Material	HW*	Dimensions (mm)
		HK 0.3				
HKG300200E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 200	30x30x6
HKG300250E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 250	30x30x6
HKG300300E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 300	30x30x6
HKG300350E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 350	30x30x6
HKG300400E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 400	30x30x6
HKG300450E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 450	30x30x6
HKG300500E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 500	30x30x6
HKG300550E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 550	30x30x6
HKG300600E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 600	30x30x6
HKG300650E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 650	30x30x6
HKG300700E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 700	30x30x6
HKG300750E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 750	30x30x6
HKG300800E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 800	30x30x6
HKG300850E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 850	30x30x6
HKG300900E	1 Pc.	Knoop	HK 0.3	Steel	HW approx. 900	30x30x6
		HK 0.5				
HKG500200E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 200	30x30x6
HKG500250E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 250	30x30x6
HKG500300E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 300	30x30x6
HKG500350E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 350	30x30x6
HKG500400E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 400	30x30x6
HKG500450E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 450	30x30x6
HKG500500E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 500	30x30x6
HKG500550E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 550	30x30x6
HKG500600E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 600	30x30x6
HKG500650E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 650	30x30x6
HKG500700E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 700	30x30x6
HKG500750E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 750	30x30x6
HKG500800E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 800	30x30x6
HKG500850E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 850	30x30x6
HKG500900E	1 Pc.	Knoop	HK 0.5	Steel	HW approx. 900	30x30x6

HW* = Hardness value



Item No.	Unit	Description				
		HARDNESS TEST BLOCKS - KNOOP (DIN EN ISO 4545-3 & ASTM E92 CERTIFICATE)				
			HK	**Material**	**HW***	**Dimensions (mm)**
		HK 1				
HKK001200E	1 Pc.	Knoop	HK 1	Steel	HW approx. 200	30x30x6
HKK001250E	1 Pc.	Knoop	HK 1	Steel	HW approx. 250	30x30x6
HKK001300E	1 Pc.	Knoop	HK 1	Steel	HW approx. 300	30x30x6
HKK001350E	1 Pc.	Knoop	HK 1	Steel	HW approx. 350	30x30x6
HKK001400E	1 Pc.	Knoop	HK 1	Steel	HW approx. 400	30x30x6
HKK001450E	1 Pc.	Knoop	HK 1	Steel	HW approx. 450	30x30x6
HKK001500E	1 Pc.	Knoop	HK 1	Steel	HW approx. 500	30x30x6
HKK001550E	1 Pc.	Knoop	HK 1	Steel	HW approx. 550	30x30x6
HKK001600E	1 Pc.	Knoop	HK 1	Steel	HW approx. 600	30x30x6
HKK001650E	1 Pc.	Knoop	HK 1	Steel	HW approx. 650	30x30x6
HKK001700E	1 Pc.	Knoop	HK 1	Steel	HW approx. 700	30x30x6
HKK001750E	1 Pc.	Knoop	HK 1	Steel	HW approx. 750	30x30x6
HKK001800E	1 Pc.	Knoop	HK 1	Steel	HW approx. 800	30x30x6
HKK001850E	1 Pc.	Knoop	HK 1	Steel	HW approx. 850	30x30x6
HKK001900E	1 Pc.	Knoop	HK 1	Steel	HW approx. 900	30x30x6
		HK 2				
HKK002200E	1 Pc.	Knoop	HK 2	Steel	HW approx. 200	30x30x6
HKK002250E	1 Pc.	Knoop	HK 2	Steel	HW approx. 250	30x30x6
HKK002300E	1 Pc.	Knoop	HK 2	Steel	HW approx. 300	30x30x6
HKK002350E	1 Pc.	Knoop	HK 2	Steel	HW approx. 350	30x30x6
HKK002400E	1 Pc.	Knoop	HK 2	Steel	HW approx. 400	30x30x6
HKK002450E	1 Pc.	Knoop	HK 2	Steel	HW approx. 450	30x30x6
HKK002500E	1 Pc.	Knoop	HK 2	Steel	HW approx. 500	30x30x6
HKK002550E	1 Pc.	Knoop	HK 2	Steel	HW approx. 550	30x30x6
HKK002600E	1 Pc.	Knoop	HK 2	Steel	HW approx. 600	30x30x6
HKK002650E	1 Pc.	Knoop	HK 2	Steel	HW approx. 650	30x30x6
HKK002700E	1 Pc.	Knoop	HK 2	Steel	HW approx. 700	30x30x6
HKK002750E	1 Pc.	Knoop	HK 2	Steel	HW approx. 750	30x30x6
HKK002800E	1 Pc.	Knoop	HK 2	Steel	HW approx. 800	30x30x6
HKK002850E	1 Pc.	Knoop	HK 2	Steel	HW approx. 850	30x30x6
HKK002900E	1 Pc.	Knoop	HK 2	Steel	HW approx. 900	30x30x6

HW* = Hardness value

Qprep Indenters

The various indenters are to be selected according to the respective test method (Brinell, Vickers, Rockwell and Knoop). The selection of QPREP indenters, test diamonds and carbide balls, which are certified according to DAkkS and/or ASTM, QATM, provides a broad test equipment portfolio for hardness testing.

Item No.	Unit	Description			
		TEST DIAMONDS MACRO			
		Description		**Length**	**Ø**
		• with DAkkS/ASTM Certificate			
QER28000EA	1 Pc.	Test diamond Rockwell		28 mm	6.5 mm
QER28400EA	1 Pc.	Test diamond Rockwell		28 mm	3.8 mm
QEV28000EA	1 Pc.	Test diamond Vickers	≥HV0.01	28 mm	6.5 mm
QEV28000EZ	1 Pc.	Test diamond Vickers Certificate	≥HV5	28 mm	6.5 mm only with DAkkS
QEK28000EA	1 Pc.	Test diamond Knoop		28 mm	6.5 mm
		BALL HOLDERS WITH PRESSED-IN BALL – MACRO			
		Description			
		• with DAkkS/ASTM Certificate			
QEB28010EA	1 Pc.	Ball holder with 1 mm ball, pressed-in			
QEB28025EA	1 Pc.	Ball holder with 2.5 mm ball, pressed-in			
QEB28050EA	1 Pc.	Ball holder with 5 mm ball, pressed-in			
QEB28100EA	1 Pc.	Ball holder with 10 mm ball, pressed-in			
QEB28116EA	1 Pc.	Ball holder with 1/16" ball, pressed-in			
QEB28108EA	1 Pc.	Ball holder with 1/8" ball, pressed-in			
QEB28104EA	1 Pc.	Ball holder with 1/4" ball, pressed-in			
QEB28102EA	1 Pc.	Ball holder with 1/2" ball, pressed-in			
		BALL HOLDERS WITH EXCHANGEABLE BALL – MACRO			
		Description			
		• with DAkkS/ASTM Certificate			
QEB28025AA	1 Pc.	Ball holder with 2.5 mm ball - exchangeable			
QEB28050AA	1 Pc.	Ball holder with 5 mm ball - exchangeable			
QEB28100AA	1 Pc.	Ball holder with 10 mm ball - exchangeable			
QEB28108AA	1 Pc.	Ball holder with 1/8" ball - exchangeable			
QEB28104AA	1 Pc.	Ball holder with 1/4" ball - exchangeable			
QEB28102AA	1 Pc.	Ball holder with 1/2" ball - exchangeable			

Item No.	Unit	Description
		CARBIDE BALLS FOR BALL HOLDERS WITH EXCHANGEABLE BALL – MACRO
		Description
		• with DAkkS/ASTM Certificate
QKG010025A	1 Pc.	Carbide balls 2.5 mm
QKG010050A	1 Pc.	Carbide balls 5 mm
QKG010100A	1 Pc.	Carbide balls 10 mm
QKG011108A	1 Pc.	Carbide balls 1/8"
QKG011104A	1 Pc.	Carbide balls 1/4"
QKG011102A	1 Pc.	Carbide balls 1/2"
		TEST DIAMONDS MICRO
		Description
		• with DAkkS/ASTM Certificate
QEV05000EA	1 Pc.	Test diamond Vickers
QEK05000EA	1 Pc.	Test diamond Knoop
QER05000EA	1 Pc.	Test diamond Rockwell
QEB05010EA	1 Pc.	Ball holder with 1 mm ball, pressed-in
QEB05025EA	1 Pc.	Ball holder with 2.5 mm ball, pressed-in
QEB05050EA	1 Pc.	Ball holder with 5 mm ball, pressed-in
QEB05116EA	1 Pc.	Ball holder with 1/16" ball, pressed-in
		POSTER OF HARDNESS COMPARISON TABLE
		Description
95016705	1 Pc.	Poster of hardness comparison table

Notes

Notes

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Suggested use by date of consumables

Remarks

The listed dates represent the minimum shelf life of the QATM consumables. Within this period the complete functionality of the products is guaranteed.

Reaching the suggested use by date does not cause a loss of the functionality of the products. Consequently, they can continue being used.

To ensure full functionality of the products, a **proper storage** is essential. The products need to be reliably protected against humidity and temperature fluctuations.

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 product data sheets.

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 suggested "use by date" starts on shipping date.

Complaints are checked by our quality management and application team.

Our general terms and conditions remain unaffected by these notes.

	Product	Suggested use by date
		Years
Cutting	Abrasive cut-off wheels	2
	CBN cut-off wheels	2
	Diamond blades	2
	Cup grinder	2
	Coolant	1
	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	1
	Epoxy resins	1
	Mounting moulds	2
	Releasing agent	2
Grinding/Polishing	Grinding stones	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	1
	Magnetic foil	2
Etching	Etchants & electrolytes	1
Miscellaneous	Ethanol & Aceton	2
	Ultrasonic cleaning agents "TICKOPUR"	2
	Replication material Provil Novo	1

Safety Data Sheets

Download of Safety Data Sheets at www.qatm.com

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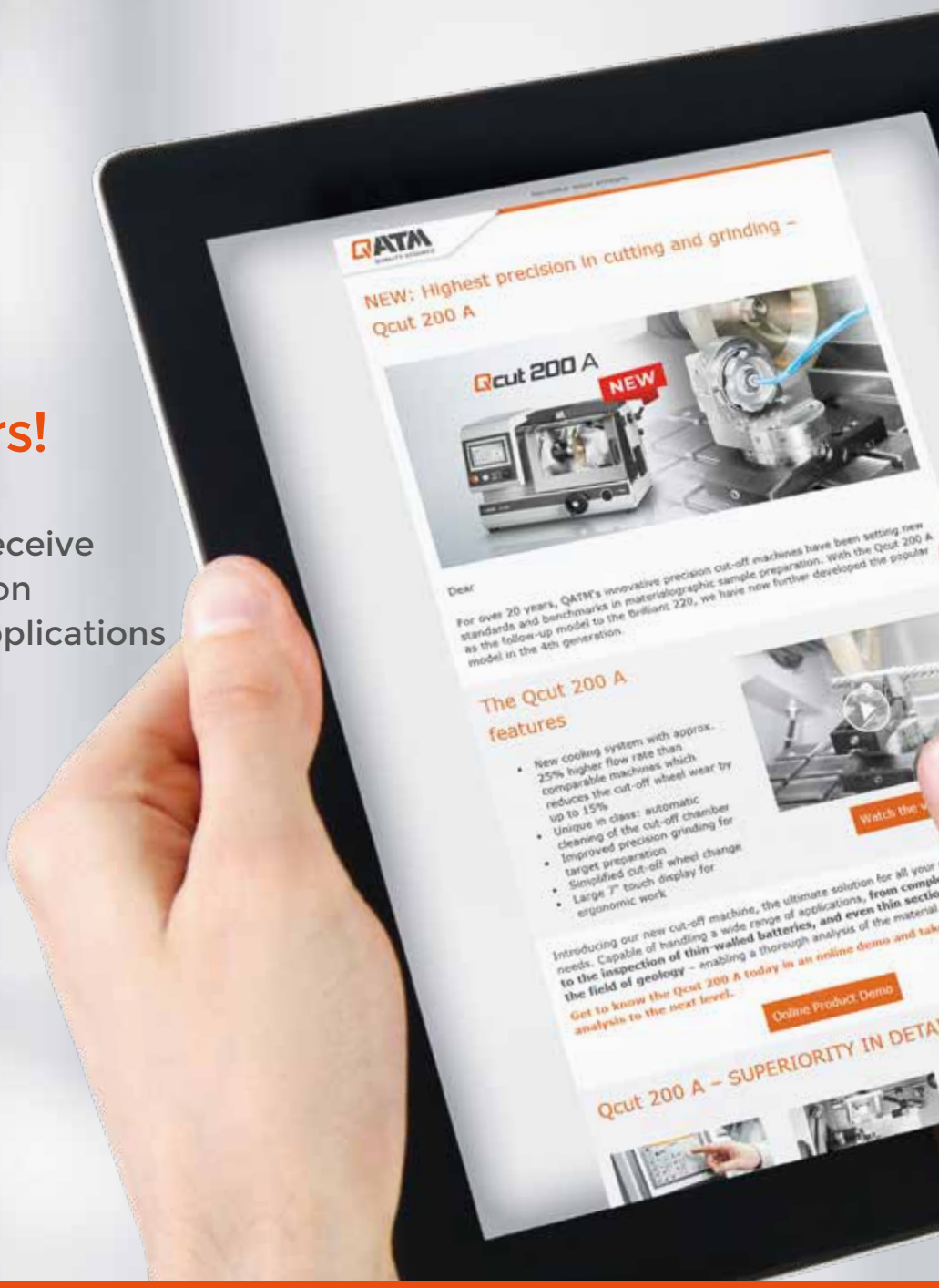

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