

Date:	09.12.2022
Editor:	Füllmann, Robert
Material:	Cast iron
Mounting:	Hot, D=40 mm, Black bakelite resin (fiber-glass reinforced)

TIP // For reference images, take a look at our wide-ranging microstructure database. There you will find many micrographs of various materials, including their state of heat treatment and the etching agent we used.

[Link to our Microstructure Database \(Gefügedatenbank\)](#)

	Grinding					Polishing			
	1	2	3	4	5	1	2	3	4
Base	SiC paper	SiC paper	SiC paper	SiC paper	SiC paper	MolTec	ChemTec		
Grit size	P80	P180	P320 + P600	P1200	P2500	3 µm mkd water-based	< 0,05 µm SiO ₂ OPS		
Lubricant	H ₂ O	H ₂ O	H ₂ O	H ₂ O	H ₂ O	coolTec II	-		
Drive	300 rpm	300 rpm	300 rpm	300 rpm	300 rpm	150 rpm	150 rpm		
Rotation direction	><	><	><	><	><	><	><		
Downforce !central pressure!	30 N/sample	30 N/sample	30 N/sample	30 N/sample	30 N/sample	20 N/sample	20 N/sample		
Time	until planar	1,5 min	1,5 min	1,5 min	0,5 min	2,5 min	2 min*		
Etching	3 % Nital								
Remarks	* Due to the sensitivity to corrosion, no H ₂ O with dishwashing liquid. After polishing, immediately put in ethanol (99.9%) in an ultrasonic bath for 30 seconds. Briefly hot and then cold blow dry for about 3-5 minutes.								

Legend [EN]	Legende [DE]
DPS = Diamond Plane Grinding Disc DSS = Diamond Grinding Disc ADAMANT = ADAMANT Diamond Grinding Disc IDAMANT = IDAMANT Diamond Grinding and Polishing Disc	DPS = Diamant-Planschleifscheibe DSS = Diamant-(Fein)schleifscheibe ADAMANT = ADAMANT Diamantschleifscheibe IDAMANT = IDAMANT-Schleifpolierscheibe
>< Countercurrent >> Concurrent	>< Gegenlauf >> Gleichlauf
mkd = monocrystalline Diamond, concentration 50 carat/litre pkd = polycrystalline Diamond, concentration 50 carat/litre	mkd = monokristalliner Diamant, Konzentration 50 Karat/Liter pkd = polykristalliner Diamant, Konzentration 50 Karat/Liter
Lubricant: coolTec I (Water-based) coolTec II (Alcohol-based) coolTec III (Oil-based) coolTec IV (Water-based) coolTec Orange (Anhydrous)	Schmiermittel: coolTec I (Wasserbasis) coolTec II (Alkohobasis) coolTec III (Ölbasis) coolTec IV (Wasserbasis) coolTec Orange (Wasserfrei)
Spüli: Dishwasher detergent with H ₂ O for cleaning the samples	Spüli: Spüli mit Wasser zum Reinigen der Proben
You can find metallography supplies in our store (link)	Verbrauchsmaterialien finden Sie in unserem Shop (Link)