

Date:	03.07.2025								
Editor:	Füllmann, Robert								
Material:	Ni base alloys								
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	PanTec	PanTec	FoxTec II	ChemTec
Grit size	P80	P120	P180/P320	P800/P1200	P2500	6 µm mkd water-based	3 µm mkd water-based	1 µm mkd water-based	< 0,05 µm SiO ₂ OPS + HCl
Lubricant	H ₂ O	H ₂ O	H ₂ O	H ₂ O	H ₂ O	coolTec I	coolTec I	coolTec I	-
Drive	200 rpm	200 rpm	150 rpm	150 rpm	150 rpm	150 rpm	150 rpm	150 rpm	150 rpm
Rotation direction	><	><	><	><	><	><	><	><	><
Downforce !centralpressure!	15 N/sample	15 N/sample	15 N/sample	15 N/sample	15 N/sample	20 N/sample	20 N/sample	20 N/sample	20 N/sample
Time	until planar (max. 0,5 min)	0,5 min	0,5 min	0,5 min	2x 0,5 min	4,0 min	4,0 min	3,0 min	2,5+0,5 Spüli
Etching	Depending on the alloy (essential: Cr and Mo content). Possible: V2A etching solution (hot); Kalling II; concentrated or dilluted HCl + H ₂ O ₂ . Always etch the freshly polished section directly!								
Remarks	OPS + HCl = 200 ml OPS + 2 ml HCl; Caution: Wear PPE!								

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 (Alkoholbasis) coolTec III (Ölbasis) coolTec IV (Wasserbasis) coolTec Orange (Wassserfrei)
Spüli: Dishwasher detergent with H2O 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)