

Date:	09.12.2022
Editor:	Füllmann, Robert
Material:	Si <sub>3</sub> N <sub>4</sub> (nitride ceramics)
Mounting:	Cold, D=40 mm, EpoClear (epoxy resin) reinforced with 50 µm ceramic powder

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	ADAMANT	ADAMANT	ADAMANT	ADAMANT		PanTec	PanTec	ChemTec	
Grit size	P80	P220	P600	P1200		9 µm mkd water-based	3 µm mkd water-based	< 0,05 µm SiO <sub>2</sub> OPS	
Lubricant	H <sub>2</sub> O	H <sub>2</sub> O	H <sub>2</sub> O	H <sub>2</sub> O		coolTec I	coolTec I	-	
Drive	150 rpm	150 rpm	150 rpm	150 rpm		300 rpm	300 rpm	150 rpm	
Rotation direction	><	><	><	><		><	><	><	
Downforce !central pressure!	40 N/sample	20 N/sample	20 N/sample	20 N/sample		40 N/sample	40 N/sample	40 N/sample	
Time	until planar	5,0 min	5,0 min	5,0 min		5,0 min	5,0 min	2,5+0,5 Spüli	
Etching	Plasma ion etching or thermal etching								
Remarks									

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 (Wasserfrei)
Spüli: Dishwasher detergent with H2O for cleaning the samples	Spüli: Spüli mit Wasser zum Reinigen der Proben
<a href="#">You can find metallography supplies in our store (link)</a>	<a href="#">Verbrauchsmaterialien finden Sie in unserem Shop (Link)</a>