

Date:	09.12.2022
Editor:	Füllmann, Robert
Material:	1.2343, chips X38CrMoV 5-1 (hot working steel)
Mounting:	Cold, D=40 mm, EpoClear (epoxy resin)

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		MolTec	MolTec	ChemTec	
Grit size	P800	P1000	P2500	P4000		3 µm mkd water-based	1 µm mkd water-based	< 0,05 µm SiO ₂ OPS	
Lubricant	H ₂ O	H ₂ O	H ₂ O	H ₂ O		coolTec I	coolTec I	-	
Drive	150 rpm	150 rpm	150 rpm	150 rpm		150 rpm	150 rpm	150 rpm	
Rotation direction	><	><	><	><		>>	>>	>>	
Downforce !central pressure!	15 N/sample	15 N/sample	15 N/sample	15 N/sample		15 N/sample	15 N/sample	15 N/sample	
Time	until planar	1,0 min	0,5 min	0,5 min		1,0 min	1,0 min	1,0 min	
Etching	3% Nital, 20 seconds								
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 (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)