QATM QUALITY ASSURED

PREPARATION METHOD

MAGNESIUM BASED ALLOYS

CUTTING

Equipment
QATM Qcut / Brillant

Consumable
Cut-off wheel: diamond, resin bond
Anti-corrosion coolant

MOUNTING

Equipment
QATM Qpress / Opal

Consumable
Bakelite red/black/green

KEM 20

Method
Hot mounting

Cold mounting

GRINDING/ POLISHING

Equipment
QATM Qpol / Saphir
Sample size Ø 40 mm

STEP	MEDIUM		rpm		N	min
Planar grinding	SiC-paper/foil* P320 (280)	H_2O	250-300	►► Syncronous rotation	15	Until plane
Planar grinding	SiC-paper/foil* P800 (280)	H_2O	250-300	►► Syncronous rotation	15	1:00
Planar grinding	SiC-paper/foil* P1200 (280)	H_2O	250-300	►► Syncronous rotation	15	1:00
Polishing	BETA	Diamond suspension (alcohol or oil based) 9 µm, poly	120-150	►► Syncronous rotation	15	5:00
Polishing	SIGMA	Diamond suspension (alcohol or oil based) 3 µm, poly	120-150	►► Syncronous rotation	15	5:00
Polishing	ZETA	Diamond suspension (alcohol or oil based) 1 µm, poly	120-150	►► Syncronous rotation	15	5:00
Final polishing	OMEGA**	Etosil E, 0.06 µm	120-150	◄► Counter rotation	25	4:00 (ethanol during final 0:30)
Optional: Final polishing	OMEGA / Qpol Vibro	Etosil E, 0.06 µm	120-150			20:00
Optional: Etching (chemical)	Nital 3%					Approx. 0:03-0:10 (ethanol 0:30)

* Coat grinding paper/foil with paraffin wax before grinding to reduce the contamination of the sample by SiC particles

** Wet the polishing cloth with ethanol before polishing