

GALA Preparation for Standard Sample Preparation

Tested on: chromium-nickel-treated steel, Ferro-Titanit, glass-reinforced plastics GRP, carbon-reinforced plastics CRP, glass, Glaslot, granite, cast iron, hard metal, Inconel, calcium fluoride, cold work steel, ceramics, plastics form steel, marble, mineralogic samples, molybdenum, molybdenum/cobalt alloys, nickel alloys, Niob, sapphire, high-speed steel, silicon carbide, sinter metals, sprayed coatings, steels (ferritic to martensic), tantalum, titanium, composites, tungsten, zirconia, and many more..

Process	Medium / Grit size	Rotation direction	rpm (min ⁻¹)	Pressure per sample 30 mm (N)	Pressure per sample 40 mm (N)	Pressure per sample 50 mm (N)	Time (min)
Planarizing	Apollo-S 125 μm ¹	⇒ or ⇐	300	35	60	100	Until flat
(The Planarization step is necessary only for large samples > 40 mm)							
Grinding I	APOLLO-S 54 μm ¹	⇒ or ⇐	300	35	60	100	1-2
Grinding II	APOLLO-S 18 μm ¹ - or - CARAT 15 μm	⇒ or ⇐	300	35	60	100	2
Polishing I	Pad STEP-PLUS MAGNUM-GREEN 3 μm ² - or - POLY-TOP-DUO 3 μm ³ - or - MAGNUM-TOP-DUO 3 μm ²	⇒	150	30	50	80	4-5
If necessary: Polishing II	Pad ALUPOL-PLUS MAGNUM-GREEN 1 μm ² - or - POLY-TOP-DUO 1 μm ³ - or - MAGNUM-TOP-DUO 1 μm ³	⇒	150	25	40	70	1-2
Alternative: Polishing II	Pad MAMBO O.P.S. oxide slurry 50 nm ⁴	⇒	150	20	30	55	< 1

Notes

¹ Use water as coolant/lubricant

² MAGNUM-GREEN: alcohol-based suspension for manual dosage - spray 5x only before polishing. During polishing use only LUBRICANT-BLUE or LUBRICANT-YELLOW. Not for use with automatic dosing systems.

³ MAGNUM-TOP-DUO/POLY-TOP-DUO: water-based suspension for manual or automatic dosage. Use without lubricants.

⁴ Moisten MAMBO pad before usage with de-ionized water. After O.P.S. polishing rinse with de-ionized water for 10 s.

