

# Aka-Brief #10 Materials of Hardness 50-150 HV

1						→	
	Rhaco Grit P320	Water	300 rpm	20 N	Until plane		
2						→	
	Largan 9	DiaUltra 9 μm	150 rpm	30 N	4:00 min		
3						→	
	Daran	DiaUltra 3 μm	150 rpm	25 N	3:00 - 5:00 min		
4						→	
	Chemal*	Colloidal Silica 50 nm Alkaline**	150 rpm	15 N	1:00 - 2:00 min		

Times are stated for a 300 mm preparation system and Forces for an individual 40 mm dia. sample.

On a 250 mm system the times should be increased by 30%, on a 200 mm system by 100%.

With larger samples the force should be increased, with smaller samples decreased.

The rotational speed of the head (sample holder or sample mover plate) used is 150 rpm.

Time and Force may vary depending on the equipment.

\* Prior to oxide polishing the polishing cloth should be wetted with water until the holder touches the polishing cloth. For the last 10 seconds of the oxide polishing step, the polishing cloth should be flushed with water to clean both sample(s) and polishing cloth.

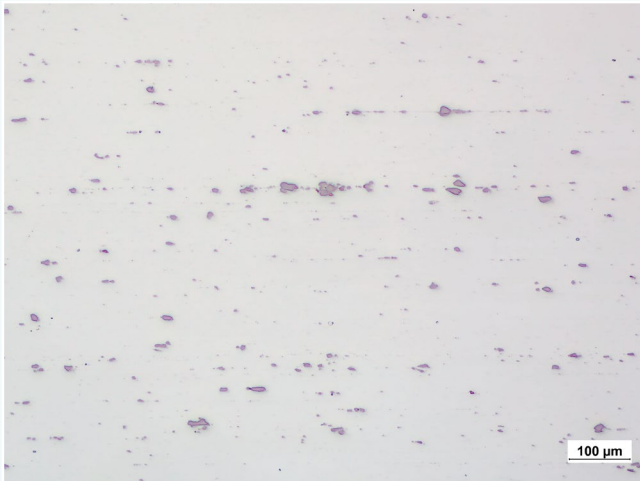
\*\* For some materials additives may need to be added, see our oxide polishing brochure for more information.

Please make sure that all necessary safety precautions are taken when handling chemicals.

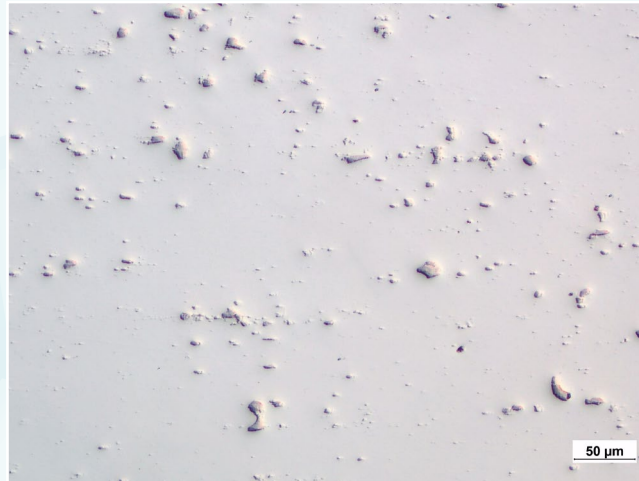


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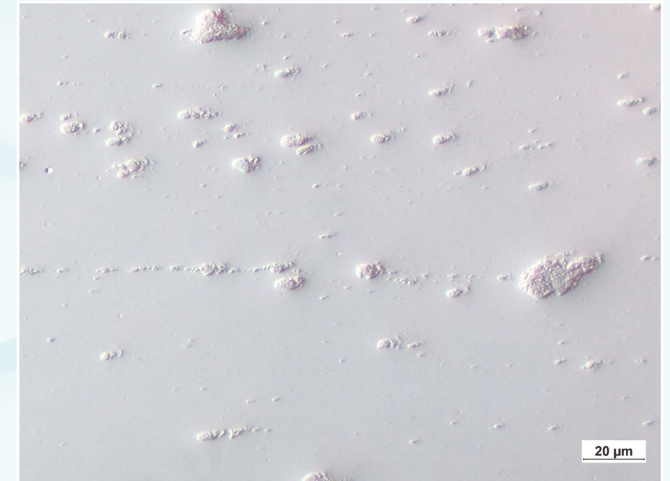
## FINAL RESULT



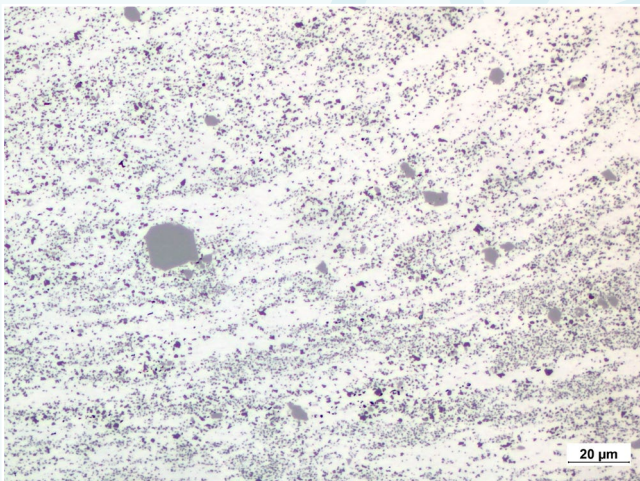
Al2024, BF, 100x



Al2024, DIC, 200x



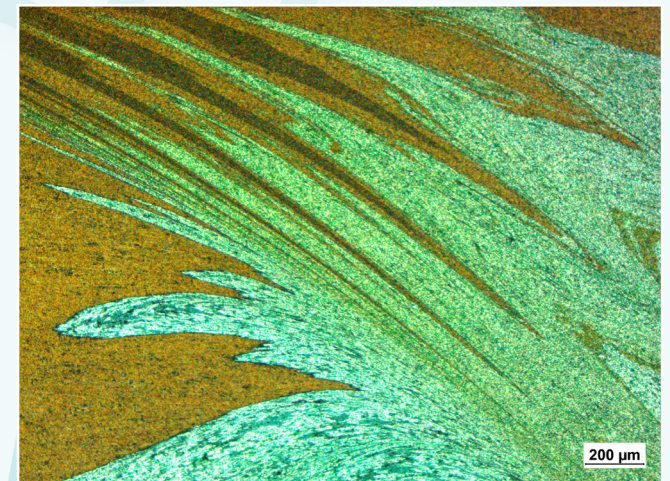
Al2024, DIC, 500x



Aluminium friction stir weld, BF, 500x



Aluminium friction stir weld, etched according to Barker, POL + Lambda Compensator, 50x



Aluminium friction stir weld, etched according to Barker, POL + Lambda Compensator, 50x