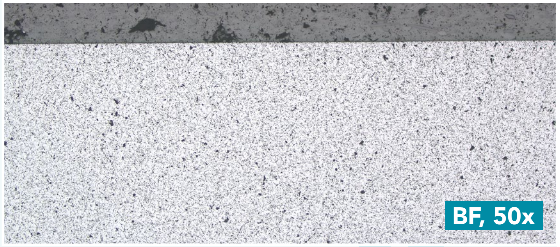
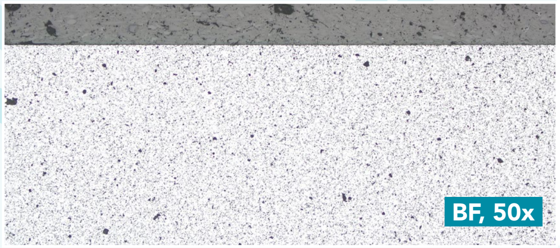
Aka-Brief **#12 Materials of Hardness 700-2000 HV**

AKASEL
THE **SMARTER ALTERNATIVE**

1	Piatto 220+	Water	300 rpm	40 N	Until plane	 BF, 50x
2	Allegran 6	DiaUltra 9 µm	150 rpm	45 N	5:00 min*	 BF, 50x
3	Allegran 3	DiaUltra 3 µm	150 rpm	45 N	5:00 min*	 BF, 50x
4	Silk	DiaUltra 1 µm	150 rpm	30 N	5:00 min*	 BF, 50x
5	Chemal**	Colloidal Silica 50 nm Alkaline	150 rpm	20 N	2:00 min*	 BF, 50x

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.

* The grinding and polishing time may need to be adjusted according to the material being prepared.

** 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 samples and polishing cloth.

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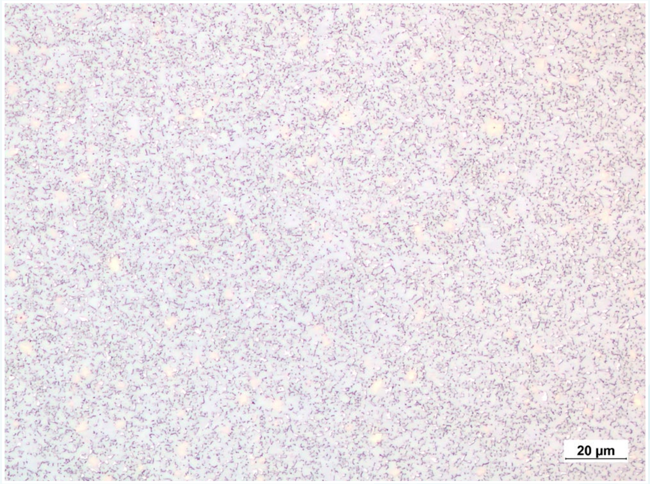
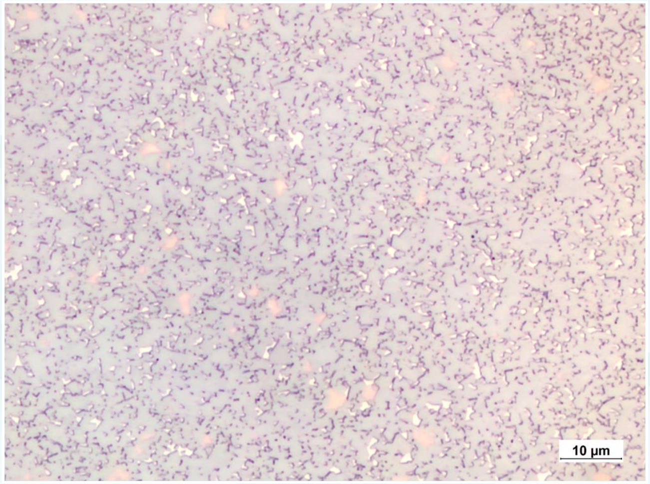
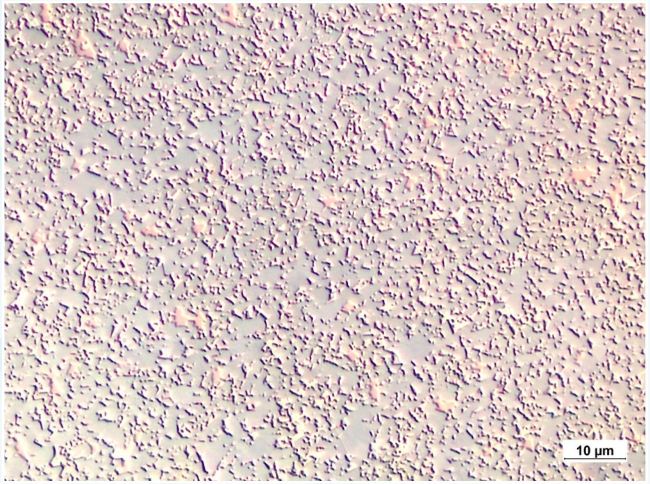
FINAL RESULT



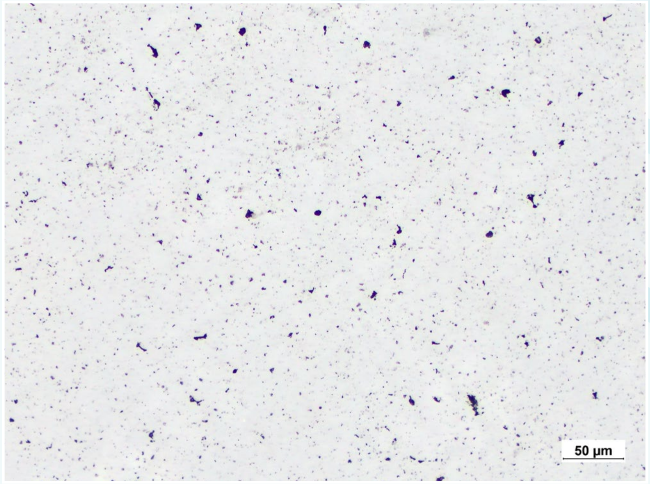
Sintered carbides, BF, 500x



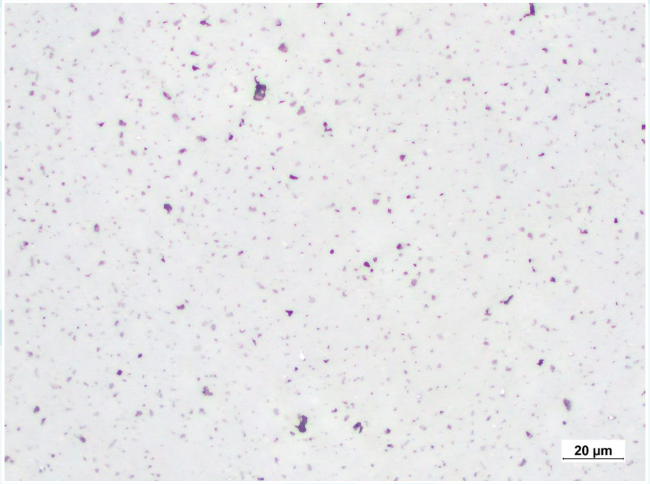
Sintered carbides, BF, 1000x



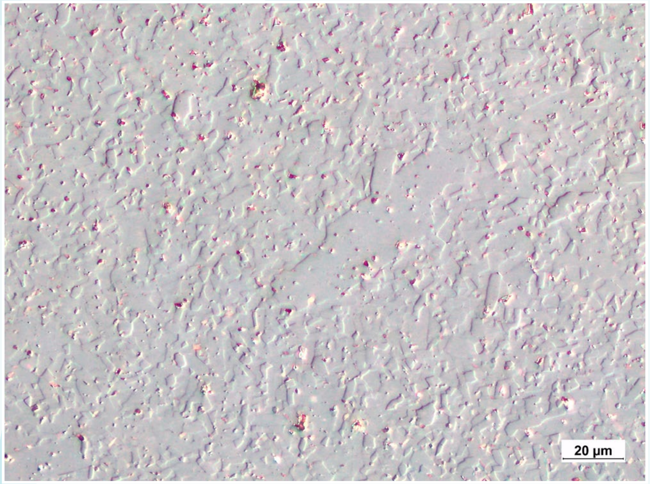
Sintered carbides, DIC, 1000x



SiC, BF, 200x



SiC, BF, 500x



SiC, DIC, 500x

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