



**PACE TECHNOLOGIES**  
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# Abrasive Grinding Paper

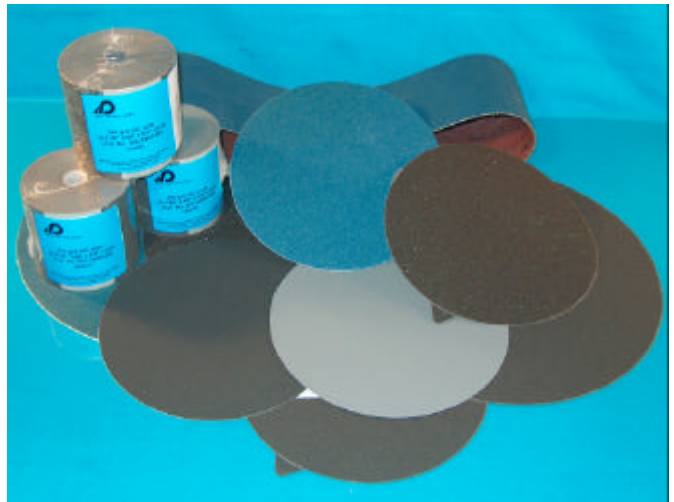


The use of **Premium SiC** abrasive paper is the most efficient and practical technique for grinding metallic metallographic specimens. Although many qualities of silicon carbide are readily available, only the premium grade SiC powder provides the most consistent results and highest grinding rates.

Premium silicon carbide powders are processed at higher temperatures than the lower quality silicon carbide powders. Thus the premium silicon carbide powders obtain a more complete reaction between the silica and carbon components. The resulting crystal structure is a hexagonal-rhombohedral crystal structure with a hardness of approximately 2500 HV. This crystal structure makes the premium silicon carbide powder an ideal abrasive for cutting and grinding because of its high hardness and sharp edges. Premium silicon carbide is also somewhat brittle, and therefore cleaves easily to produce sharp new edges (self sharpening).

The resulting **Premium SiC** abrasive is an excellent abrasive for maximizing cutting rates while minimizing surface and subsurface damage. For metallographic preparation, **Premium SiC** abrasives are applied or coated onto abrasive grinding papers. To increase the durability as well as to improve the ability to remove used papers, a thin mylar film backing is bonded to the **Premium SiC** paper.

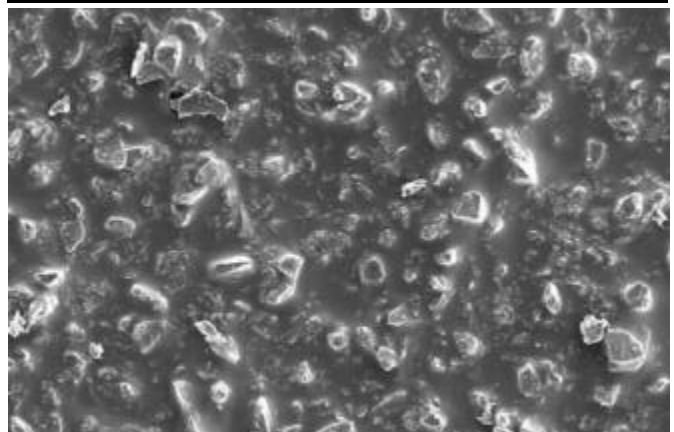
**Premium SiC** abrasive paper is available in all common grit sizes ranging from 60 grit to 1200 grit.



Standard ANSI grit	European (P-Grade)	Median Diameter (microns)	Surface Roughness on Steel, Rc 30 (Ra -nm)
60	P60	250	-
80	P80	180	1140
120	P120	106	1050
180	P180	75	880
240	P220	63	300
320	P360	40.5	230
400	P800	25.8	120
600	P1200	15.3	110
800	P2400	6.5	25
1200	P4000	2.5	20



DIGIMAT+ Polisher with Dispenser



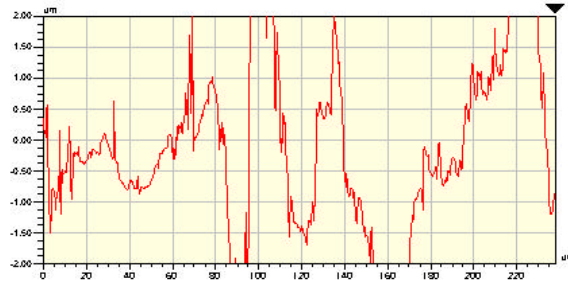
SEM micrograph of 600 grit SiC Abrasive Paper (original mag. 150x)

**Premium SiC Abrasive Surface Finish and Surface Roughness for hardened steel (Original Magnification 50x)**

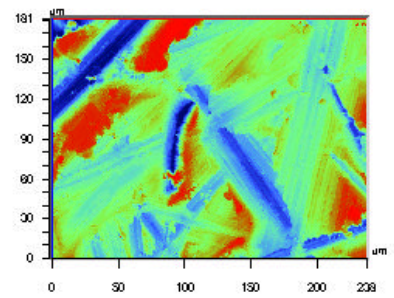
60 grit Premium SiC



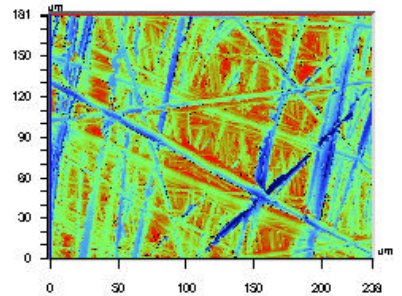
2-dimensional line profile



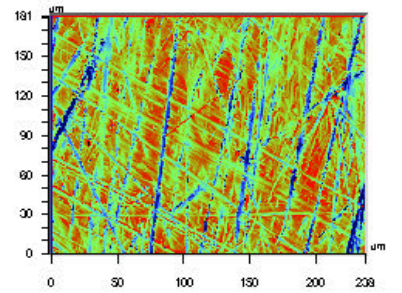
3-D optical contour mapping



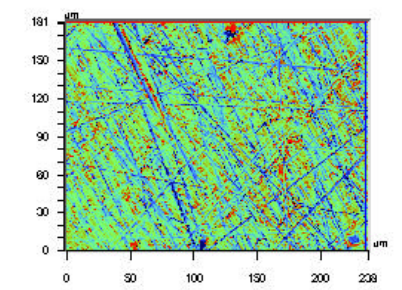
240 grit Premium SiC



400 grit Premium SiC



600 grit Premium SiC



1200 grit Premium SiC

