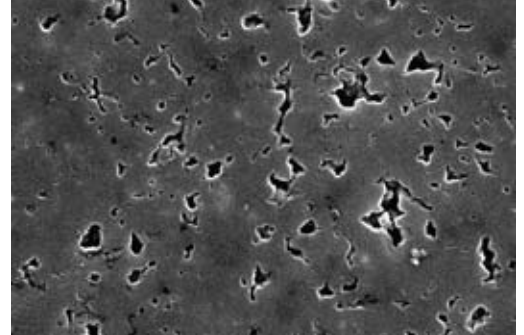


Diamond Innovations® is the leading global supplier of manufactured superabrasives products required for optimal material removal in the machining industry. Our manufactured product offering includes full round blanks, standard inserts and custom cut parts with chamfers, holes, relief angles and more.

## Compax® 1200 Fine Grain Polycrystalline Diamond



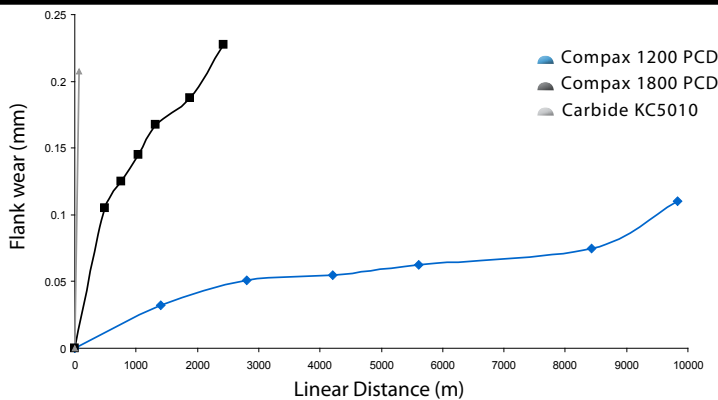
Compax 1200 polycrystalline diamond (PCD) is a well-sintered product with a fine grain microstructure. The fine grain structure is ideal for applications in which surface finish is critical; such as, aluminum wheel finishing, medium silicon/aluminum reaming, or when a WEDM prepared edge is utilized. Titanium machining is also ideally suited for Compax 1200 PCD.



SEM image (3000X) showing the well-sintered PCD layer of Compax 1200 PCD

Average Diamond Grain Size	1.5 $\mu\text{m}$
Volume % Diamond	92%

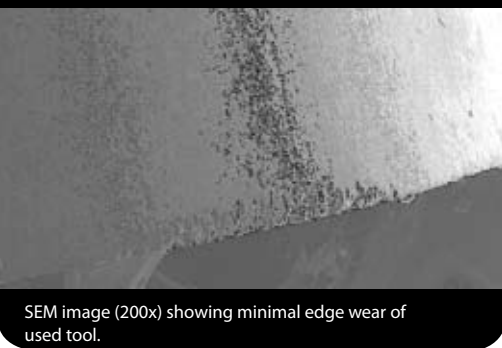
### Application Development Laboratory Analysis: Titanium Machining



Workpiece	Ti-6Al-4V
Cutting Speed	180 m/min*
Feed Rate	0.127 mm/rev
Coolant	Jet Coolant
Tool	SPG-422 11° Relief
DOC	0.25 mm

\*Typical speed with WC tool: 80 m/min

### Field Application Case Study: Aluminum Wheel Finishing



SEM image (200x) showing minimal edge wear of used tool.

Workpiece	A-356 Aluminum
Cutting Speed	2000 rpm - 16 inch Wheel
Feed Rate	0.35 mm per minute
DOC	0.1 mm

