

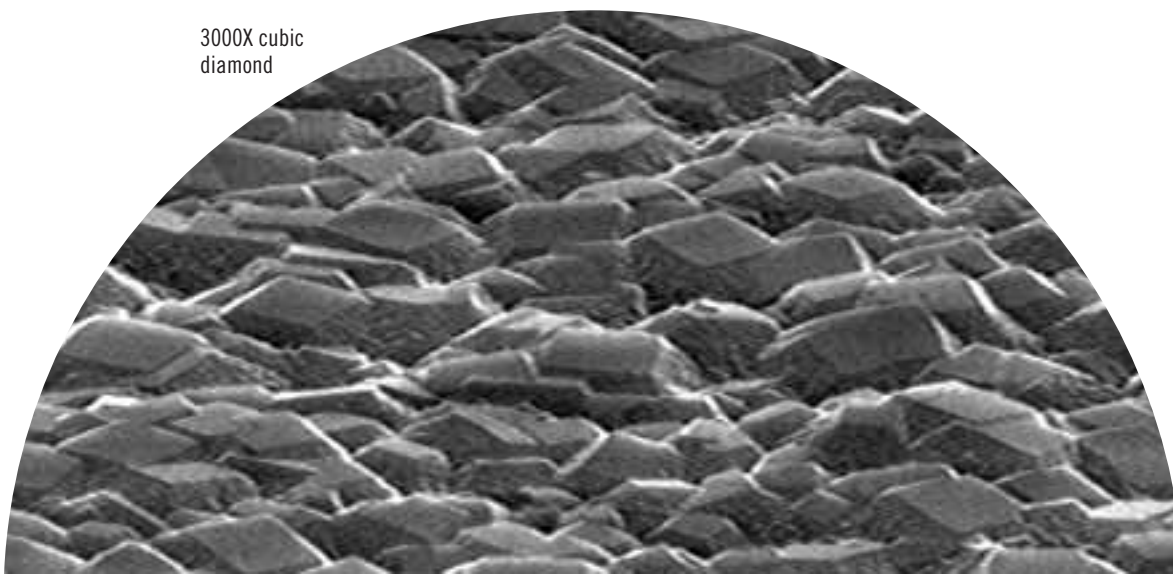
Coating Services

Crystallume DCC coatings can be applied to customer supplied cutting tools and wear parts.

Some of the common carbide grades that are approved for coating are listed in the chart below. The specific requirements are 6% Cobalt and 94% Tungsten Carbide with a 1 to 3 micron grain size. For more information contact one of our engineers regarding your application needs.

Company	Grade	Company	Grade
ag&I Cutting Tools	AG22	Stellram (Teledyne)	H21
Allied CarbiTech	E6	Superbee	NT33
ANC	AN-6	Sumitomo	G10E
Carbology	HX, 883	Tool-Flo	C25
Carbex	CH01, CH1	Toshiba	TH10
Carbide	CD-30	Teledyne	HA,H21
Carmet	CA4	Tungaloy	H10T
Cerametal	HC05	Toshiba Tungaloy	TH10
Circle	C2,C3,C25	Ultramet	Z20, Z22, Z86
Duramet	DU2,DU22	Valenite-Widia	VC-2, VC-21, VC-28
Dijet	KT9	Valenite-Widia	THM
Dapra	F1	Vardex	VK2
Emuge Franken	K10	Waukesha	WK10
Fansteel/Hydro Carbide	HCUS10,HC290	Walter	WKM
Firth Stirling	H21	Widia	THM
Hertel	KMF	VNE – Versa-Turn	V12K
Guhring	DK120		
Iscar	IC20	Company	Grade
Ingersoll	ICT111	Fansteel	HC290
Kaisar	D5	Newcommer	H21P
Kennametal	K68, K10	RTW	CQ2
Komet	K10	Sandvik	H6N
Lovejoy	LTC-21	Valenite	WA2
Mitsubishi	HTi10	Extramet	EMT806
Cera Tizit	H216T,H10T	Kennametal	K96
Pro-Cut	PC2	Carmet	CA4
Rouse Arno	AK10	Tungaloy	G1F
RTW	CQ2, CQ23		
Sandvik	H13A		

3000X cubic
diamond



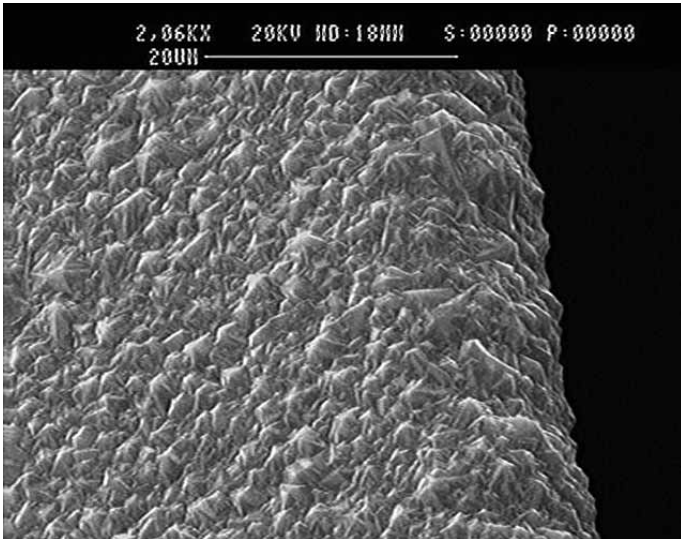
Smooth Diamond – What is It? Where is it Used?

Crystallume has been coating tools with smooth diamond since the beginning of 2003. Field tests have shown that the smooth diamond has performed most successfully in the turning and boring of low silicon aluminum alloys.

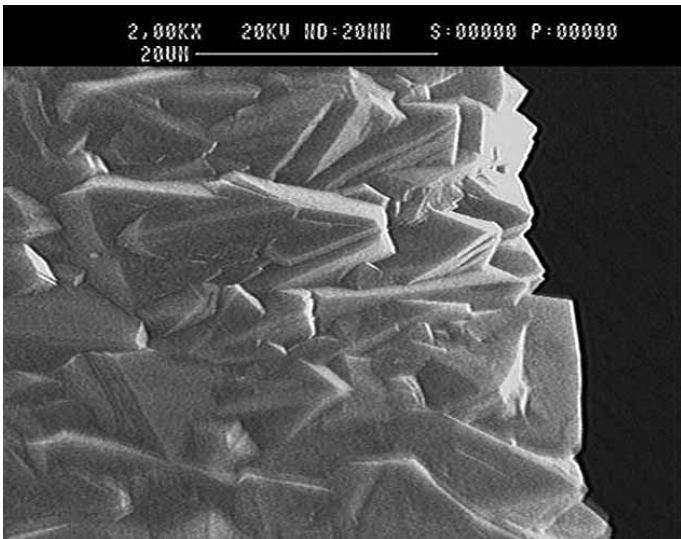
The new smooth coating is about half the thickness of our standard coating which helps to give the tool a sharper edge. The grain size of the new coating is less than 1 micron, compared to our standard coating with an average grain size of 10-12 microns. This gives the new smooth coating an improved surface for resisting BUE (Built Up Edge) a key in machining low silicon aluminums.

The smooth diamond tools work best where finish and edge sharpness is an issue. The tool life will still be equivalent to PCD tools in the same application.

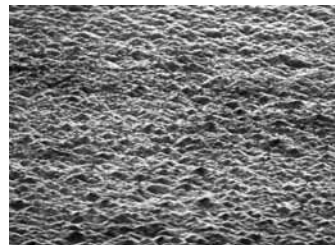
Smooth diamond tools are available by special order only. Please remember to specify Smooth Diamond for those applications where surface finish is an issue.



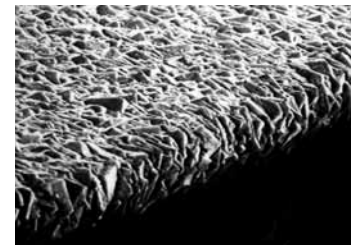
2000X smooth diamond cutting edge



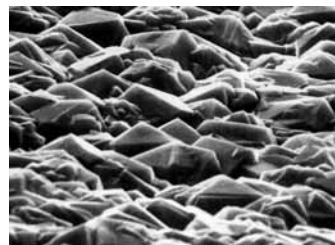
2000X faceted diamond cutting edge



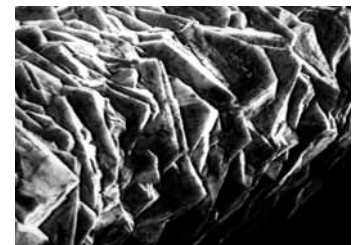
3000X smooth diamond



1000X continuous uniform coatings over the entire surface



3000X faceted diamond



4000X faceted edge lowers cutting forces