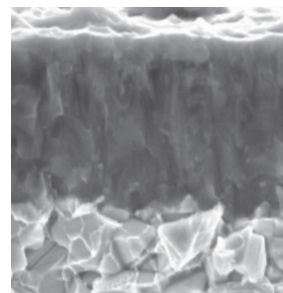


MS+ (Al,Ti,Cr)N multilayer coating (MS Plus)

MS plus provides long tool life on materials up to 52 HRC.

Greatly improved wear resistance even when machining hardened materials.



Properties of (Al,Ti,Cr)N multilayer coating (MS Plus)

	(Al,Ti,Cr)N multilayer	(Al,Ti)N	(Al,Cr)N
Hardness (HV)	3200	2800	3100
Oxidation Temperature (°C)	1100	800	1100
Adhesion (N)	100	80	80

CRN CRN Coating

Specially designed for milling copper electrodes and copper alloys.

CRN coating has been developed for copper alloy milling. It has superior wear resistance and excellent adhesion strength by using Miracle coating technology. The excellent anti adhesion properties needed for copper machining has been achieved due to its low coefficient of friction at high temperatures.

DLC DLC Coating

For milling of aluminium alloys at high speed.

Hardness similar to that of CVD diamond coating achieved but with high adhesion strength.

Mitsubishi Materials and NAGATA SEIKI have jointly developed a unique DLC coating that has substantially increased "adhesion strength" compared to previous DLC coatings.

DFC Diamond Coating

Proprietary CVD diamond coating produces excellent wear resistance and smooth hole surface.

The newly developed CVD diamond coated carbide material achieves outstanding abrasion resistance and smoothness due to a proprietary fine multilayer diamond crystal control technology.

DF Diamond Coating

Diamond coating for graphite and non-ferrous materials.

Owing to Mitsubishi's unique plasma chemical vapor deposition (CVD) coating technology, the diamond coating is affixed firmly to the substrate to ensure long tool life and prevent peeling.

DF end mill series suitable for graphite machining.

V VIOLET Coating

(Al,Ti)N coating, excellent adhesion strength for HSS tools.

Violet coating is the name of the technology of successfully applying a Miracle type coating to HSS substrate tools. Mitsubishi's unique technology of applying (Al,Ti)N coating at the low temperatures required for HSS substrates, means that Violet coating has the same level of adhesion strength as Miracle coating. Additionally high film hardness and excellent oxidation resistance properties have also been realised.