

INSERT GRADES

CERMET

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CERMET

KYOCERA is known as the leading manufacturer of cermets. Cermet is a composite material combining Ceramic and Metal. Typical materials used in cermets are TiC, TiN, TiCN and NbC. Designed to provide long tool life and excellent surface finishes, cermets combine toughness with superior wear resistance.

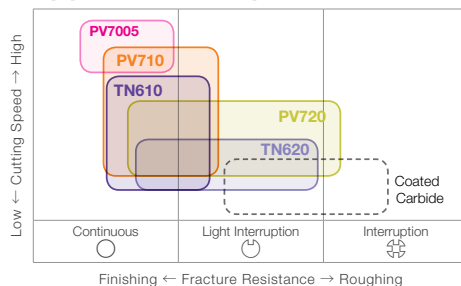
PVD COATED CERMET

PVD Coated Cermet is a cermet substrate with a thin coating offering high wear resistance and high adhesion resistance. The coating is applied by PVD (Physical Vapor Deposition) technology. Generally because of the low processing temperature of PVD compared with CVD, PVD Coated Cermet features less deterioration and more bending strength.

FEATURES OF CERMET & PVD COATED CERMET

Material	Description	Color	Main Component (Coating Composition)	Advantages
<div style="background-color: #0070C0; color: white; padding: 5px; text-align: center; font-weight: bold;">P</div> Steel	Cermet	TN610	Gray TiCN	<ul style="list-style-type: none"> Inner structure has high toughness and chipping resistance along with thermal shock resistance Application: Recommended cermet for high wear resistance
		TN620	Gray TiCN	<ul style="list-style-type: none"> Inner structure has high toughness and chipping resistance along with thermal shock resistance Application: Recommended cermet for stable steel machining and high quality surface finish
		TN6010 (Super Micro-Grain)	Gray TiCN	<ul style="list-style-type: none"> Improved surface cermet with superior wear resistance and toughness Application: Economical uncoated cermet for steel
		TN60	Gray TiCN+NbC	<ul style="list-style-type: none"> General purpose cermet with superior wear resistance and toughness Application: Cutting of steel and stainless steel
		TN6020 (Super Micro-Grain)	Gray TiCN	<ul style="list-style-type: none"> Super micro-grain cermet with superior wear resistance and toughness Application: Steel and stainless steel cutting
		TN100M	Gray TiCN+NbC	<ul style="list-style-type: none"> Tough cermet with improved oxidation resistance and thermal shock resistance Application: Milling of steel at high speed
		TC40	Gray TiC+TiN	<ul style="list-style-type: none"> Good balance of wear resistance and toughness Application: Grooving and threading of steel
<div style="background-color: #D9534F; color: white; padding: 5px; text-align: center; font-weight: bold;">K</div> Cast Iron	MEGACOAT NANO Cermet	PV710	Gold TiCN (MEGACOAT NANO)	<ul style="list-style-type: none"> MEGACOAT NANO efficient machining with high quality surface finishes and superior wear and adhesion resistance Application: Recommended cermet for long tool life and stable machining for high speed continuous cuts
		PV720	Gold TiCN (MEGACOAT NANO)	<ul style="list-style-type: none"> MEGACOAT NANO efficient machining with high quality surface finishes and superior wear and adhesion resistance Application: Recommended cermet for stable steel machining and high quality surface finish
	MEGACOAT Cermet	PV7010 (Super Micro-Grain)	Blackish Red TiCN (MEGACOAT)	<ul style="list-style-type: none"> Heat-resistant MEGACOAT on improved surface cermet with excellent wear resistance and toughness Application: Stable and improved tool life in steel cutting, excellent surface finish
		PV7025 (Super Micro-Grain)	Blackish Red TiCN (MEGACOAT)	<ul style="list-style-type: none"> MEGACOAT on the super micro-grain cermet Application: High strength and long life given by MEGACOAT
		PV7040	Blackish Red TiC+TiN (MEGACOAT)	<ul style="list-style-type: none"> MEGACOAT on the super micro-grain cermet Application: Grooving of steel
		PV7005	Blackish Red TiC+TiN (MEGACOAT)	<ul style="list-style-type: none"> Heat-resistant MEGACOAT on cermet with excellent wear resistance Application: High speed finishing of gray and nodular cast iron

Application Map



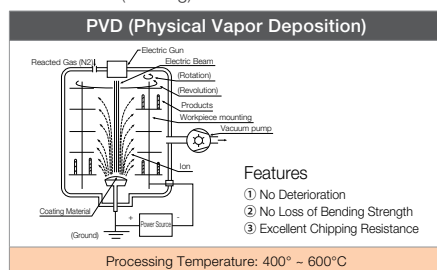
TN-Series (Uncoated Cermet)

- TN610:** High Wear Resistance
- TN620:** Chipping Resistance

PV-Series (MEGACOAT NANO Cermet)

- PV710:** Long Tool Life and Stable Machining for High Speed Continuous Cuts
- PV720:** First Recommendation for Efficiency and High Quality Surface Finish

PVD (Coating)



PVD (Properties)

