

Insert Grades

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CVD Coated Carbide



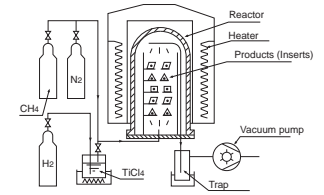
CVD Coated Carbide

KYOCERA's CVD coated carbide grades are based on ceramic thin film technology and provide stable, efficient cutting at high speeds or heavy interrupted applications.

Features

- Applicable from low to high speed cutting and from finishing to roughing
- Stable cutting is achieved due to the superior toughness and crack resistance
- Cutting times are reduced due to good chip control from effective chipbreakers

CVD (Chemical Vapor Deposition)



● Features

- ① Equally deposited on face
- ② Easy application for multilayer deposition
- ③ Enabling thick coating

Processing temperature: 900~1100°C

Features of CVD Coated Carbide

Workpiece Material	Symbol	Color	Coated Composition main Component	Advantages
P Steel	CA5505	Gold	Micro columnar TiCN+Al ₂ O ₃ +TiN	<ul style="list-style-type: none"> • Improved wear resistance due to hard carbide substrate and micro columnar structure of coated composition • Application: High speed continuous cutting of steel, continuous to light interrupted cutting of cast iron
	CA5515	Gold	Micro columnar TiCN+Al ₂ O ₃ +TiN	<ul style="list-style-type: none"> • Improved wear resistance and longer tool life due to micro columnar structure of coated composition • Application: High speed cutting of steel, continuous to light interruption
	CA5525	Gold	Micro columnar TiCN+Al ₂ O ₃ +TiN	<ul style="list-style-type: none"> • Improved toughness and wear resistance due to tougher carbide substrate and micro columnar structure of coated composition • Application: First choice for general cutting of steel, roughing to interruption
	CA5535	Gold	Micro columnar TiCN+Al ₂ O ₃ +TiN	<ul style="list-style-type: none"> • Improved toughness due to tougher carbide substrate • Application: Roughing to heavy interrupted cutting of steel
	CR9025	Gold	Columnar TiCN+TiN	<ul style="list-style-type: none"> • Improved toughness and stability due to specialized carbide substrate with plastic deformation resistance • Application: Cut-off, grooving and multi-function cutting of steel
M Stainless Steel	CA6515	Gold	Micro columnar TiCN+Al ₂ O ₃ +TiN	<ul style="list-style-type: none"> • Specialized carbide substrate for stainless steel cutting, excellent wear resistance • Application: Continuous to light interrupted cutting of stainless steel
	CA6525	Gold	Micro columnar TiCN+Al ₂ O ₃ +TiN	<ul style="list-style-type: none"> • Specialized carbide substrate for stainless steel cutting, excellent notching resistance and toughness • Application: First choice for general cutting of stainless steel, from finishing to roughing, continuous to interruption
K Cast Iron	CA4010	Gold	Columnar TiCN+Al ₂ O ₃ +TiN	<ul style="list-style-type: none"> • Excellent high temperature stability resists plastic deformation and oxidation wear. • Application: Continuous to light interrupted high speed cutting of cast iron
	CA4115	Gold	Micro columnar TiCN+Al ₂ O ₃ +TiN	<ul style="list-style-type: none"> • Improved wear resistance due to micro columnar structure of coated composition • Application: Nodular cast iron cutting, continuous to light interruption
	CA4120	Gold	Micro columnar TiCN+Al ₂ O ₃ +TiN	<ul style="list-style-type: none"> • Improved toughness and wear resistance due to tougher carbide substrate and micro columnar structure of coated composition • Application: Roughing to heavy interrupted cutting of nodular cast iron
	CA4505	Blackish gray	Micro columnar TiCN+Al ₂ O ₃	<ul style="list-style-type: none"> • Stable, long tool life due to improved bonding strength of coated layers and special treatment of the surface of the top coated layer • Application: For gray cast iron and nodular cast iron at high speed in continuous to light interrupted cutting
	CA4515	Blackish gray	Micro columnar TiCN+Al ₂ O ₃	<ul style="list-style-type: none"> • Stable, long tool life due to improved bonding strength of coated layers and special treatment of the surface of the top coated layer • Application: First choice for gray cast iron and nodular cast iron in light to heavy interrupted cutting

Application Map

● Steel

Classification	Application			
	Continuous	Light interruption	Interruption	Heavy interruption
P05	High speed, Longer tool life CA5505			
P15	Light interruption, Stable CA5515			
P25	Interruption, General purpose CA5525			
P35	Heavy interruption, High feed CA5535			

● Stainless Steel

Cutting speed	Application		
	Continuous	Light interruption	Interruption
High	CA6515		
Low	CA6525 (First choice grade)		PR1125
	Continuous	Light interruption	