

CARBIDE

A GRADES



CARBIDE

Due to its superior mechanical features carbide is used in a variety of applications. KYOCERA produces a variety of carbides, including KW10 for non-ferrous materials and micro-grain carbides for precision cutting.

FEATURES

- Tough and hard
- Good thermal conductivity
- Suitable for cutting non-ferrous metals and non-metals
- Stable cutting at low cutting speeds, including milling operations

FEATURES OF CARBIDE

Material	Description	Color	Main Component (Coating Composition)	Advantages
	KW10	Gray	WC+Co	<ul style="list-style-type: none"> • ISO identification symbol K carbide (K10 relevant) • Application: Stable cutting of cast iron, non-ferrous materials, non-metals, and titanium alloys
	GW15	Gray	WC+Co	<ul style="list-style-type: none"> • ISO identification symbol K carbide (equivalent to K10), tough micro-grain carbide • Application: High wear resistance and toughness for non-ferrous materials, and non-metals, and titanium alloys
	GW25	Gray	WC+Co	<ul style="list-style-type: none"> • ISO identification symbol K carbide (K30 relevant) • Application: Stable wear resistance and anti-chipping performance for milling operations of aluminum
	SW05	Gray	WC+Co	<ul style="list-style-type: none"> • ISO identification symbol K carbide (K05 relevant) • Application: Continuous cutting and finishing of titanium alloys maintaining superior wear resistance
	SW10 (Made to Order)	Gray	WC+Co	<ul style="list-style-type: none"> • ISO identification symbol K carbide (K10 relevant) • Application: Continuous and light interrupted cutting of titanium alloys maintaining superior wear resistance and stable result
	SW25 (Made to Order)	Gray	WC+Co	<ul style="list-style-type: none"> • ISO identification symbol K carbide (K25 relevant) • Application: Interrupted and light interrupted cutting of titanium alloys maintaining stable result

DLC COATING



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High quality and long tool life machining of aluminum. Achieves long tool life with hardness close to that of diamond and maintains an excellent surface finish with aluminum welding resistance.

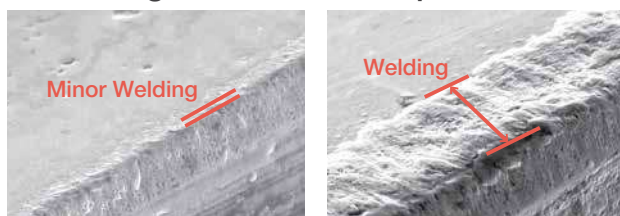
FEATURES

- Excellent surface finish
- Stable machining with excellent peeling resistance
- Improved chip evacuation due to high lubrication

FEATURES OF CARBIDE

Material	Description	Color	Main Component (Coating Composition)	Advantages
	PDL025	Iridescent	C	<ul style="list-style-type: none"> • Hydrogen free DLC coating for high hardness close to that of diamond • Application: Stable cutting of aluminum with turning, milling, and cut-off operations

Welding Resistance Comparison



PDL025

Competitor A

Cutting Conditions: $V_c = 2630$ sfm, $f_z = 0.004$ ipt, $a_p \times a_e = 0.118'' \times 0.197''$, Dry
 Cutter Dia. $\phi 1.000''$ Workpiece: 5052 Cutting Length: 57 m