

PCD



PCD (Polycrystalline Diamond)

KYOCERA diamond material is a synthetic diamond sintered under high temperatures and pressures. PCD (Polycrystalline diamond) is ideal for non-ferrous metals and non-metals.

FEATURES

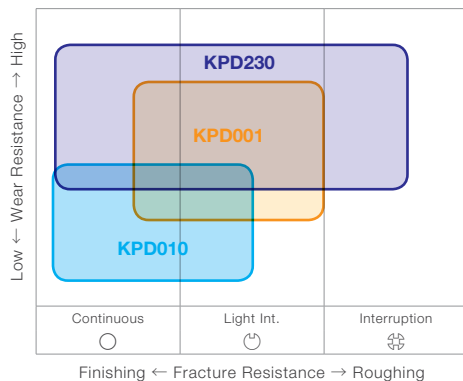
- Applicable for non-ferrous metals, non-metals turning, milling and other various type of cutting
- Long tool life due to extreme hardness
- Capable of high cutting speeds which increases cutting productivity
- Reduced edge build-up allows for high precision cutting
- Diversified applications for cutting of non-ferrous materials and non-metals
- Finished surface will be rainbow colored.
(a mirror-like finished surface will not be obtained when single crystal diamond is used.)

FEATURES OF PCD			
Material	Description	Av. Grain Size (µm)	Advantages
	KPD001	0.5	<ul style="list-style-type: none"> • Super Micro-Grain PCD features cutting edge strength, wear resistance, fracture resistance, good edge-sharpening performance and long, stable tool life. • Application: High speed cutting of aluminum alloys, brass, non-ferrous metals and non-metals including plastics, fiberglass, carbide and ceramics.
	KPD010	10	<ul style="list-style-type: none"> • Good wear resistance and toughness, good grindability • Application: General purpose, high speed cutting of aluminum alloys, non-ferrous metals and non-metals including plastics, fiberglass, carbide and ceramics.
	KPD230	2-30	<ul style="list-style-type: none"> • Superior abrasive wear resistance and toughness due to high density PCD with mixed rough and fine grains • Application: High speed milling of aluminum alloys, non-ferrous metals, plastics and fiberglass

Applications

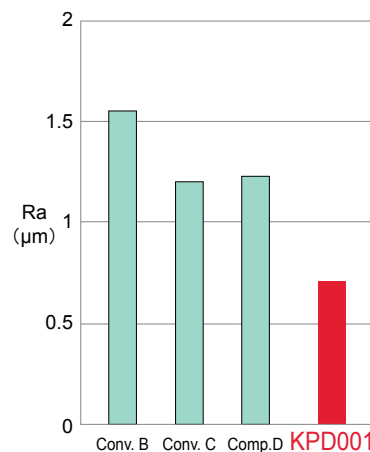
Workpiece Material	Non-ferrous materials (Aluminum / Non-ferrous metals / Non-metals)				Difficult-to-Cut Materials Titanium / Titanium alloys			
	Finishing ← → Roughing				Finishing ← → Roughing			
Cutting Range								
Classification	N01	N10	N20	N30	S01	S10	S20	S30
Turning Milling	KPD001				KPD001			
	KPD010				KPD010			
	KPD230							

Application Map

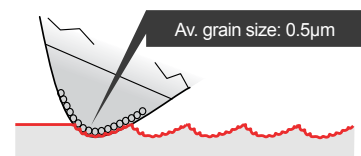


Surface Finish Roughness

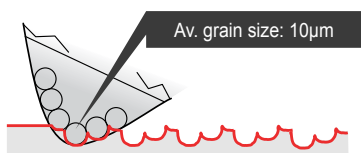
Comparison of Aluminum Cutting



Excellent surface finish provided by Super Micro-Grain KPD001



Surface finish of conventional PCD



(Grain size affects surface finish quality)

GRADES
A
LINEUP / INSERTS
B
45° / 70° LEAD
C
75° LEAD
D
90° LEAD
E
HIGH FEED
F
MULTI-FUNCTION
G
SLOT MILLS
H
RADIUS / BALL-NOSE
J
OTHER APPLICATIONS
K
TOOL HOLDING
O
SPARE PARTS
P
TECHNICAL
R
INDEX
T