

THINBIT[®] INSERT GRADE INFORMATION

DURA-MAX[®] 2000 CARBIDE

DURA-MAX[®] 2000 is a versatile and tough sub-micron grain carbide. Because of its high transverse rupture strength and fine grain structure, **DURA-MAX[®] 2000** performs well with interrupted cuts. This grade is recommended for cutting steel, cast iron, stainless steel and applications where there are interrupted cuts.

DURA-MAX[®] 2000 approximates an ANSI C4/C5.

DURA-MAX[®] 5000 CARBIDE

DURA-MAX[®] 5000 is a hard, abrasion resistant, sub-micron grain carbide. Because of its hardness and fine grain structure, **DURA-MAX[®] 5000** provides excellent edge and corner retention. This grade is recommended for cutting abrasive materials, non-ferrous alloys, aluminum, plastic and applications where there are no interrupted cuts.

DURA-MAX[®] 5000 approximates an ANSI C2/C3.

HIGH SPEED STEEL

High Speed Steel will cut most materials. It will take considerable abuse. However, high speed steel will not wear as well as carbide. We suggest the use of high speed steel for jobs of 500 cuts or less. It also works well on older machines which do not have high enough spindle speeds to take advantage of carbide.

High Speed Steel is an M2 grade.

KAISER TOOL COMPANY, INC.

Phone: 888-THINBIT (888-844-6248) or (260) 484-3620 • Fax: 888-THINFAX (888-844-6329) or (260) 482-1881
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THINBIT® INSERT COATING INFORMATION

TiN (TITANIUM NITRIDE)	Excellent general purpose PVD coating for most applications. TiN offers excellent wear resistance and allows 10% - 30% increase in speeds and feeds. TiN also increases lubricity at cutting edge which reduces galling and welding. TiN is not recommended for Nickel alloys or Titanium. Color: Yellow/gold Thickness: 2-4 microns (.0001"-.0002")
TiN/TiCN (TITANIUM NITRIDE/ TITANIUM CARBONITRIDE)	A multi-layer, PVD coating good for cutting Aluminum, Brass, Bronze, Copper and its alloys and Cast Iron. TiCN improves tool life and allows increased speeds and feeds. Should out-perform TiN in abrasive and difficult to machine materials. TiN/TiCN is harder and more impact resistant than TiN. Color: Gray/bronze Thickness: 2-6 microns (.0001"-.0004")
TiAlN (TITANIUM ALUMINUM NITRIDE)	A high performance PVD coating which excels in cutting abrasive or difficult-to-machine materials such as Titanium, Inconel, Waspaloy, Hastelloy, High Nickel Alloys, harder varieties of Stainless Steel. Good performance with interrupted cuts, high temperatures and dry machining. Color: Dark gray/black Thickness: 2-4 microns (.0001"-.0002")
DIAMOND	Works well in cutting Aircraft Aluminum, Automotive Cast Aluminum, Copper, Brass, Graphite, Carbon, Various Plastics, Nylon, Natural Wood, Composite Woods and Kurtzite. Diamond coating is not recommended for cutting steels or other ferrous metals. Color: Black Thickness: 2-6 microns (.0001"-.0004")

Note on coolants:

THINBIT® inserts are compatible with all coolant types. Carbide and High Speed Steel give best performance in most materials when run flooded with coolant. Carbide does not perform well in thermal shock situations. Keep insert flooded or run dry.

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