

### 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® 3000 CARBIDE

**DURA-MAX® 3000** is a hard and wear resistant sub-micron grain carbide. **DURA-MAX® 3000** is designed for light finish cuts. This grade is recommended for cutting steels and applications where precision finish cuts are required.

**DURA-MAX® 3000** approximates an ANSI C7/C8.

**DURA-MAX® 3000 inserts are only available on MINI-BORE® style inserts. See Section 3 of this catalog for further detail.**

### DURA-MAX® 4000 CARBIDE

**DURA-MAX® 4000** is a tough, general purpose sub-micron grain carbide. **DURA-MAX® 4000** is designed for roughing. This grade is recommended for cutting steels, stainless steel, nickel based alloys and applications where there are interrupted cuts.

**DURA-MAX® 4000** approximates an ANSI C5/C6.

**DURA-MAX® 4000 inserts are only available on MINI-BORE® style inserts. See Section 3 of this catalog for further detail.**

### 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.

### DURA-MAX® 8000 CBN

**DURA-MAX® 8000** is a **CBN** tipped insert which provides an increased production rate, improved surface finish and dimensional control when used on high-temperature alloys such as inconel, nickel base alloys and materials with a hardness of Rockwell C-35 or harder.

**DURA-MAX® 8000 CBN tipped inserts are only available on MINI-BORE® style inserts. See Section 3 of this catalog for further detail.**

### DURA-MAX® 9000 PCD

**DURA-MAX® 9000** is a **PCD** tipped insert which provides an increased production rate, improved surface finish and dimensional control when used on non-ferrous and abrasive metals such as aluminum, brass and copper.

**DURA-MAX® 9000 PCD tipped inserts are only available on MINI-BORE® style inserts. See Section 3 of this catalog for further detail.**

### 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 M42 grade.

## KAISER TOOL COMPANY, INC.

<p><b>TiN</b> (TITANIUM NITRIDE)</p>	<p>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.</p> <p>Color: Yellow/gold</p> <p>Thickness: 2-4 microns (.0001"-.0002")</p>
<p><b>TiCN</b> (TITANIUM CARBONITRIDE)</p>	<p>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. TiCN is harder and more impact resistant than TiN.</p> <p>Color: Gray/bronze</p> <p>Thickness: 2-6 microns (.0001"-.0004")</p>
<p><b>TiAlN</b> (TITANIUM ALUMINUM NITRIDE)</p>	<p>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.</p> <p>Color: Dark gray/black</p> <p>Thickness: 2-4 microns (.0001"-.0002")</p>
<p><b>DIAMOND</b></p>	<p>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.</p> <p>Color: Silver</p> <p>Thickness: 2-6 microns (.0001"-.0004")</p>

**Note on coolants:**

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

**Note on coatings:**

Part numbers may not always include coating designation.

**KAISER TOOL COMPANY, INC.**