



# Grade System for Threading Applications

## Grade Selection Table

| Type                      | Grade             | Coating          | Composition and Application   | Area of use  |    |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|---------------------------|-------------------|------------------|---|--|----|----|----|----|----|----|----|----|----|-----------------|-----------|--|--|--|
|                           |                   |                  |   | Standard designation   | 05 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | Wear resistance | Toughness |  |  |  |
| Uncoated Carbide Grades   | K68               | C-Class          | <b>composition:</b> A hard, low binder content, unalloyed WC/Co fine-grained grade.<br><b>application:</b> The K68 grade has excellent abrasion resistance for machining cast irons, austenitic stainless steels, non-ferrous metals, nonmetals, and most high-temperature alloys. Use as a general purpose grade for non-ferrous materials.  | P  |    |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           |                   | C3               |   | M  |    |    |    |    |    |    |    |    |    |                 |           |  |  |  |
| PVD-Coated Carbide Grades | KC5010            | TiAlN            | <b>composition:</b> An advanced PVD TiAlN coating over a very deformation-resistant unalloyed WC-Co substrate.<br><b>application:</b> The KC5010 grade is ideal for finishing to general machining of most workpiece materials at higher speeds. Excellent for machining most steels, stainless steels, cast irons, non-ferrous materials and super alloys under stable conditions. It also performs well machining hardened and short-chipping materials.  | P  |    |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           |                   | C3, C4           |   | M  |    |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           | KC5025            | TiAlN            | <b>composition:</b> An advanced PVD TiAlN-coated grade with a tough, very fine grain unalloyed substrate.<br><b>application:</b> For general purpose machining of most steels, stainless steels, high-temperature alloys, titanium, irons, and non-ferrous materials. Speeds may vary from low to medium, and will handle interruptions and high feed rates.  | P  |    |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           |                   | C2, C6           |   | M  |    |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           | KC5410            | TiB <sub>2</sub> | <b>composition:</b> A PVD TiB <sub>2</sub> coating over a very deformation-resistant unalloyed substrate.<br><b>application:</b> The KC5410 grade is designed for roughing, semifinishing, and finishing of free machining (hypoeutectic <12.2% Si) aluminum, aluminum alloys and magnesium alloys. The TiB <sub>2</sub> coating is harder than TiN and TiAlN coatings and has an extremely smooth surface, resulting in reduced surface friction, speedy chip flow, and outstanding wear resistance. In addition, built-up edge is prevented because this coating has a very low affinity for aluminum. The substrate is unalloyed and fine grained and offers sharp edges, smooth surfaces, and excellent thermal deformation resistance and edge integrity. Inserts with a ground periphery are polished before coating and have a sharp edge. Molded inserts have a light hone. | P  |    |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           |                   | C3 - C4          |   | M  |    |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           | NEW!              | KU25T            | TiN/TiAlN   | <b>composition:</b> An advanced PVD coating over a tough and highly wear-resistant carbide substrate.<br><b>application:</b> KU25T is ideal for finishing to general machining of most workpiece materials. This grade provides the toughness needed to handle the demands of grooving, threading, and cut-off operations. KU25T performs extremely well when machining most steels, stainless steels, cast irons, non-ferrous materials, and superalloys under stable conditions. KU25T can also be effectively applied when machining hardened and short-chipping materials. | P  |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           |                   |                  | C2, C6  |  | M  |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           | PVD-Coated Cermet | KT315            | TiN/TiCN/TiN  | <b>composition:</b> A multi-layered, PVD TiN/TiCN/TiN, coated cermet turning grade.<br><b>application:</b> Ideal for high-speed finishing to medium machining of most carbon and alloy steels and stainless steels. Performs very well in cast and ductile iron applications too. Provides long and consistent tool life and will produce excellent workpiece finishes.  | P  |    |    |    |    |    |    |    |    |                 |           |  |  |  |
|                           |                   |                  | C3, C7  |  | M  |    |    |    |    |    |    |    |    |                 |           |  |  |  |

LT

TOP NOTCH

TECHNICAL DATA

THREADING TOOLS