

MC6015 - PUSHING THE BOUNDARIES OF STEEL TURNING

ISO Insert Series for Steel Turning

Mitsubishi Materials is now pushing the performance boundaries of steel turning beyond the realms of its competitors with the introduction of the new MC6015 insert grade. The new ISO series of CVD coated inserts are ideal for the ISO application range from P05 to P20 and have been developed with Mitsubishi's patented Nano-Texture Coating Technology. This technology delivers exceptional wear and edge chipping resistance, even when machining at the high performance parameters required in today's metal cutting world.

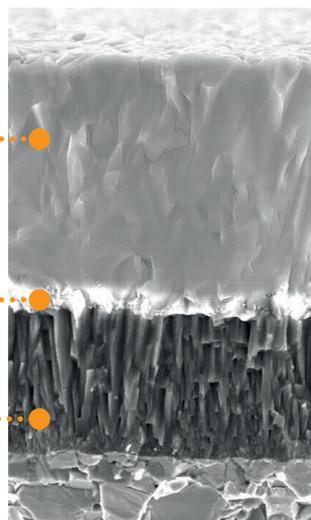
The unique new nano-texture coating operation optimises the crystal growth to tightly compact the crystals into a uniform structure that prevents edge failure and prolongs tool life. This Al₂O₃ ultra thick layer makes MC6015 the insert selection of choice for continuous machining of steel, especially when conducting high speed, high feed machining that generates extreme surface temperatures. This new patented layer is coated with a smooth and hard wearing surface that prevents abnormal damage and weld chipping.

Below the smooth surface and nano-texture layer, Mitsubishi has introduced its new TOUGH-Grip Technology layer and is the second of two patented technologies that are included in the MC6015 series. The TOUGH-Grip Technology is an interface between the insert layers that is controlled at the nano-level. The benefit of this technology is that it allows the TOUGH-Grip layer to provide an extreme bonding to prevent delamination of the various layers. This results in uncompromising performance with tool life and consistency that is far beyond alternate insert grades.

**Ultra thick layer
 Nano-texture Al₂O₃**
 Delivers outstanding wear resistance even at high temperature

TOUGH-Grip
 Prevents delamination of the coating

Nano-Texture
 Provides superior wear and chipping resistance



MC6015 has a gold coloured Ti compound top-face layer that delivers outstanding heat and wear resistance. This special Ti compound also helps to eliminate crater wear on the Al₂O₃ layer, which makes the new MC6015 grade suitable for high speed machining. Whilst this combats the onset of crater wear, Mitsubishi has also coated the flank surfaces with a smooth layer that prevents abnormal wear and chipping. When integrated with the microscopic TiCN coating, the smooth layer delivers improved surface finishes and consistent tool life.

The MC6015 insert grade is available with a vast array of chipbreaker geometries to provide the optimal performance parameters for light, medium and heavy cutting applications on carbon and alloy steels. Offered in positive and negative designations with a wide variety of geometries and chip breakers for each type. Whatever the insert required, Mitsubishi has the corresponding tool holder available to guarantee that steel turning performance expectations are met with the new MC6015 Series.

Nano-Texture Coating Technology

Optimised crystal growth condition

