Fine Particle Abrasion
XC1000 / XC9000 Comparison

The XC1000 material is as this illustration depicts. The 2-5 micron tungsten carbide particles are held in a cobalt binder matrix. Large wearing particles “skip” over the hard carbides while the softer cobalt binder is protected. Wear life in this case is a function of the carbide density and applied coating thickness. In fine particle abrasion, sub-micron particles can get between the 2-5 micron carbides and erode the softer cobalt binder. The hard carbides fall out of the matrix and wear life is shortened.

Extreme Coatings XC9000 Millennium Carbide contains sub-micron carbide particles that help protect the softer cobalt binder. These particles fill the spaces between individual 2-5 micron carbide particles and protect them from being eroded. Our XC9000 wears about 25% longer than a standard tungsten carbide coating. Thirty percent of this material is composed of sub-micron carbides. These dense carbides and coating thickness now contribute to exceptional wear life.