

## Cerbide™ Material Properties

Cerbide™ is produced from a patented process combining the properties of ceramics and cemented tungsten carbide, enabling it to perform at high levels of abrasion and erosion resistance. The result is a cost-efficient, high-performance product that wears significantly longer in both wet and dry low-impact applications.

### Abrasion Resistance

Dry Wheel [ASTM G-65]  
(1/cm<sup>3</sup>) 670

Wet Wheel [ASTM B-611]  
(1/cm<sup>3</sup>) 515

### Hardness

Vickers (Hv) 2400  
Rockwell (a) 95.5

**TRS** (ksi) 240

**Density** (g/cc) >15.45

**Young's Modulus** (GPa) 620

**Fracture Toughness** (MPam) 5.9

**Thermal Conductivity**  
(W/mK) 120

**Thermal Expansion**  
( x 10<sup>-6</sup> / C ) 4.5

**Electrical Resistivity**  
( x10<sup>-6</sup> Ohm X cm) 17

**Specific Heat** (cal/molK) 8.46

### Working Temperature

Uncoated (C) 400  
Coated (C) 1100

**Corrosion rate** - Cerbide is 8 times better than Nickel binder Tungsten Carbide after 144 hours in Nitric, Acetic, or Sulfuric Acids.

- Cerbide is non-magnetic
- Cerbide can be EDM cut and diamond ground
- Cerbide can be brazed (we suggest Braze 495 used with Handy Flux Type B-1 from Lucas-Milhaupt)

**CERBiDE™**

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