

HB-411



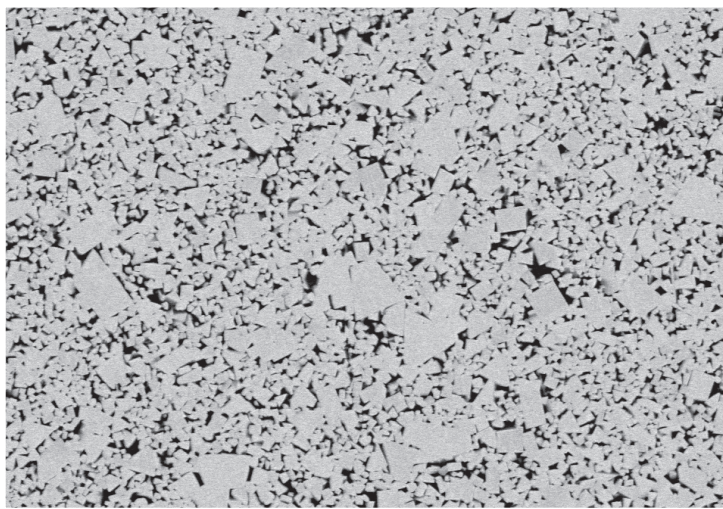
Cutting & Wear Resistance

Impact & Toughness



Grade HB-411 features both wear and toughness characteristics to offer exceptional performance in punch applications. The grade provides predictable results in ammunition punches and dies.

- Exceptional performance in punch applications
- Ammunition punches and dies



Grade HB-411 bimodal grain structure, 88/11.5 (carbide / cobalt %) offers toughness and wear resistance for punch applications.

Composition

Tungsten Carbide
Cobalt

WC 88%
Co 11.5%

Microstructure Grain Size (ASTM B-390)

Mixed

Hardness Rockwell A (ASTM B-294)

90.00

Transverse Rupture Strength (ASTM B-406)

530,000 PSI

Density (ASTM B-311)

14.39

Manufactured in preforms, altered and standard blank designs