

Engineered Coatings, Inc.
P. O. Box 4702
Parker, CO 80134-4702
Frank M. Kustas, PhD
Ph. & fax: (303) 977-9503
info@eciwear-corrosioncoatings.com

Product Data Sheet:

Titanium Carbide/Diboride -Metal PVD Wear Coating

Cermet Coating

- Unbalanced -Magnetron Physical Vapor Deposition (PVD)
- Composition: Titanium Carbide/Diboride and Graphite

Benefits

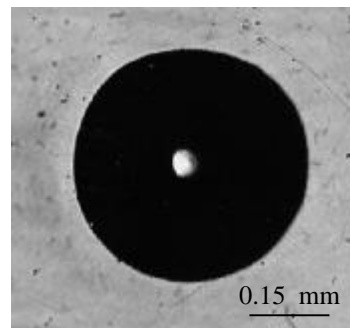
- Extremely High Hardness (29 GPa)
- Exceptional Adhesion, Wear Resistance
- High Toughness, Cracking Resistance
- Low Temp. Deposition, Will Not Temper Steel Parts
- Smooth, As-Coated Surface Finish
- Virtually No Part Growth (Net Shape)
- Scaleable Process

Performance Data

% W	L _C , N	Hardness (GPa)	Wear Factor mm ³ /Nm ¹)
~16	61.7	24.7	1.08E-6
~22	71.3	29.5	1.51E-6

Notes : 1) vs. WC-Co Ball; 1.33 GPa Stress
Coating Thickness, ~ 1.0 μm
L_C -Scratch Adhesion Force

Exceptional Toughness / Cracking Resistance



Minor Radial Cracking From
150 Kg Indentation

Applications

- Engine Components
- Forming Tools
- Biomedical Instruments, Implants
- Mechanical Components - Gears, Bearings, Seals

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President