InnerArmor Erosion Wear Coating Specifications

InnerArmor®

InnerArmor Erosion Wear is a thick coating for applications requiring maximum erosion resistance, such as down-hole tools with high-velocity flow.

Erosion Resistance: ASTM G76	Passed, no erosion damage to surface
Hardness	2000 HV / 20 GPa (1800–2200 HV, to suit application)
Young's Modulus (E-Modulus)	170 GPa (between 150–200 GPa)
Sliding Wear Rate (25N load with WC sphere surface)	Typical 5.1E-07 mm^3/Nm (Dry)
Coefficient of Friction (25N load with WC sphere surface)	< 0.05 (Dry)
Adhesion to Steel	Excellent
Coating Thickness	50–80 microns (to suit application)
Color	Grey-Black
Applicable Substrates	Hardened Steel, Cr-Plated, Inconel® 718, Tool Steel
Max Environment Temperature	Up to 752˚F (400˚C)
Deposition Rate	Typical > 0.4 micron/minute
Deposition Temperature	248˚F–392˚F (120˚C–200˚C) (substrate dependent)

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Sub-One Technology