

TUNGSTEN CARBIDE GRADE CR9C FOR OIL & GAS APPLICATIONS

New Corrosion and Erosion Resistant Grade

Hyperion Grade CR9C Benefits

- Exceptional corrosion and slurry erosion resistance
- Good toughness
- Excellent general purpose grade.

Potential Applications for Grade CR9C

- Flowback choke valve components
- Directional drilling tools such as measurement while drilling (MWD) components
- Rotary steerable systems (RSS) components
- Subsea flow control choke valve components
- Completion tools
- Hydraulic fracturing pump seats.



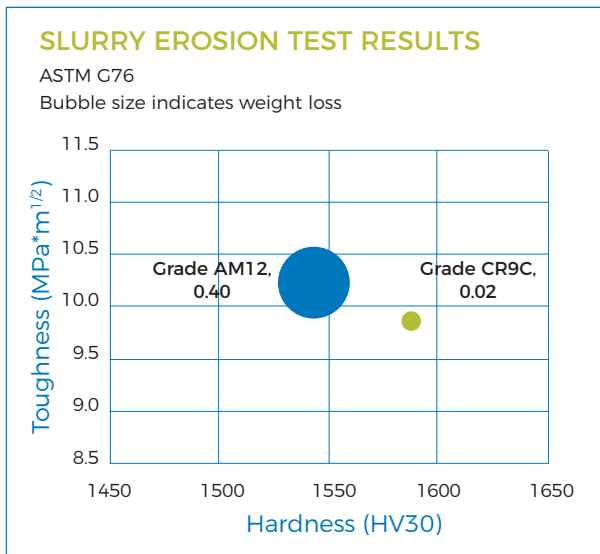
PHYSICAL AND MECHANICAL PROPERTIES

Hyperion Grade	Composition % by Weight		Average Carbide Grain Size (μm)	Density (g/cm ³)	Hardness at 20°C		Toughness	
	WC	Binder			HV30	HRA	K _{1C} [Palmqvist] (MPa*m ^{1/2})	TRS [3 point] (MPa)
CR9C	91	9	1.0	14.6	1575	91.8	10.2	>3000

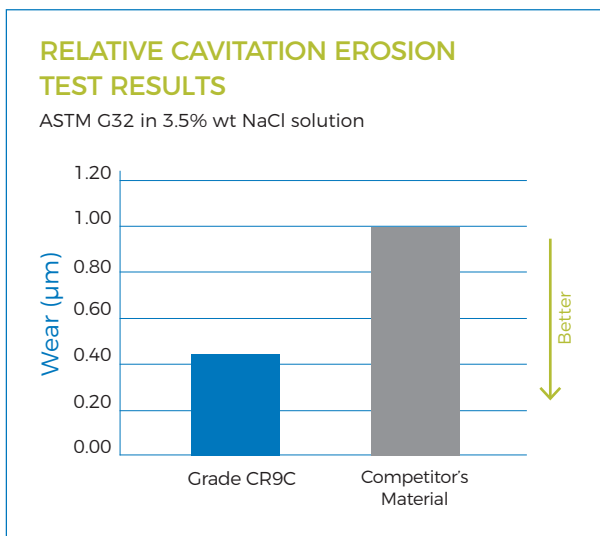
All data shown are typical values.

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EROSION



CORROSION/EROSION COMBINATION



CORROSION

