

# Hyperion Grade AM12

## TUNGSTEN CARBIDE GRADE AM12 FOR OIL & GAS APPLICATIONS

### Fluid Flow and Directional Drilling Applications

#### Hyperion Grade AM12 Benefits

- Exceptional balance of erosion resistance, corrosion resistance, and toughness
- Versatile grade for many oil & gas applications.

#### Applications for Grade AM12

Grade AM12 has been successfully deployed in the following applications:

- Subsea flow control choke valve components
- Hydraulic fracturing pump seats
- Completion sand control nozzles
- Completion sand control inflow control devices (ICDs)
- Rotary steerable systems (RSS) hinge bushings.



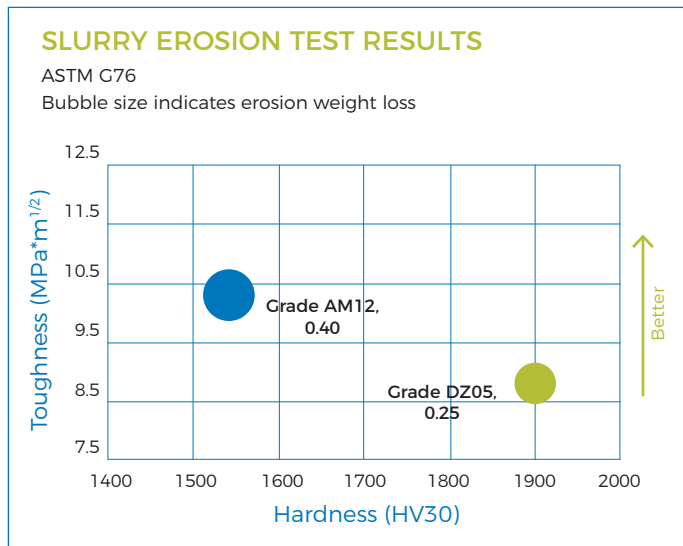
#### PHYSICAL AND MECHANICAL PROPERTIES

Hyperion Grade	Composition % by Weight		Average Carbide Grain Size ( $\mu\text{m}$ )	Density ( $\text{g}/\text{cm}^3$ )	Hardness at 20°C		Toughness	
	WC	Binder			HV30	HRA	$K_{1C}$ [Palmqvist] ( $\text{MPa}\cdot\text{m}^{1/2}$ )	TRS [3 point] (MPa)
AM12	88	12	0.8	14.2	1550	91.5	12.2	3300

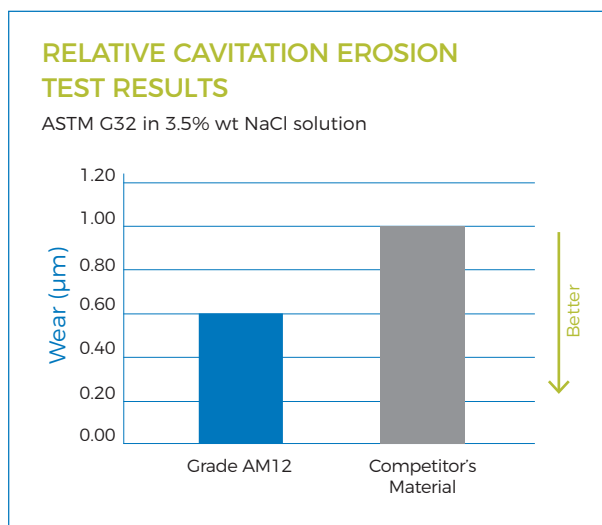
All data shown are typical values.

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### EROSION



### CORROSION/EROSION COMBINATION



### CORROSION

