

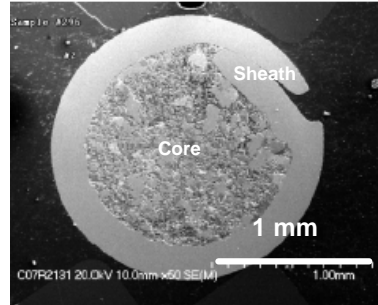
Product Technical Information

Nanostructured Alloy Cored Wire Feedstock

NanoCore™ W7405-S Wire for Hardfacing Surfaces



Photo of a typical cored wire bundle



SEM micrograph of cored wire cross-section

Thermal Spray or Welding Grade Cored Wires

Cored Wire Size: 1.6 mm or 1/16 in diameter (or other sizes can be custom made).

Cored Wire Composition

<i>NanoCore™</i> W7405-S	Nominal Composition											
	Fe	Cr	Si	Mn	Ni	C	W	Co	Mo	Nb+Ta	B	Ce
Balance	13.05	0.65	0.65	0.49	1.35	17.35	2.52	3.0	4.7	1.78	0.81	

Features

The *NanoCore™* W7405-S is a nanostructured cored wire that exhibit properties including:

- excellent coating bond strength to the coated component
- can withstand high temperatures
- excellent corrosion resistance
- excellent erosion and abrasive wear resistance
- excellent fatigue properties

NanoCore W7405-S wire exhibits properties similar to Praxair 140MXC™, but may exhibit better wear and fatigue resistance due to nanoparticle alloying and dispersion strengthening of the matrix phase. 140MXC™ is a trademark of Praxair Surface Technologies

Suggested Applications

NanoCore™ W7405-S is a special thermal spray or arc welding cored wire for intermediate to high temperature hardfacing applications, providing wear-, erosion-, and corrosion-resistant surfaces. Typical applications are rollers in steel mills and other high loading where, fatigue, abrasive, erosive, and corrosive resistance are important.

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