

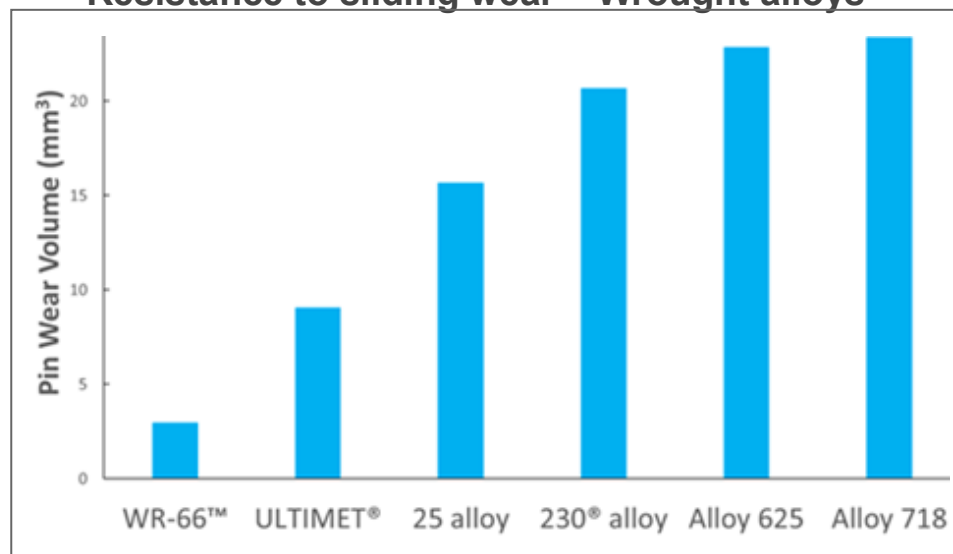
HASTELLOY® WR-66™ alloy

Haynes International, Inc. is pleased to announce the development of HASTELLOY® WR-66™ alloy. This alloy offers excellent resistance to sliding wear and corrosion in aqueous corrosive media, superior to most Ni- and Co-based alloys in wrought form. In the weld overlay form, the alloy possesses corrosion resistance and ductility vastly superior to commonly used Cobalt-Chromium alloys such as alloy STELLITE® 6, while maintaining comparable resistance to sliding wear and galling. The alloy's high ductility and ability to offer greater control of weld bead shape and thickness enables superior resistance to cracking during weld overlay deposition compared to other Co-based alloys. Valve, pump, bearing and seal applications in the oil and gas, chemical processing and power generation markets as well as consumer electronics and industrial cutting tools are among potential applications. Preliminary results from laboratory and partial mill products are given below.

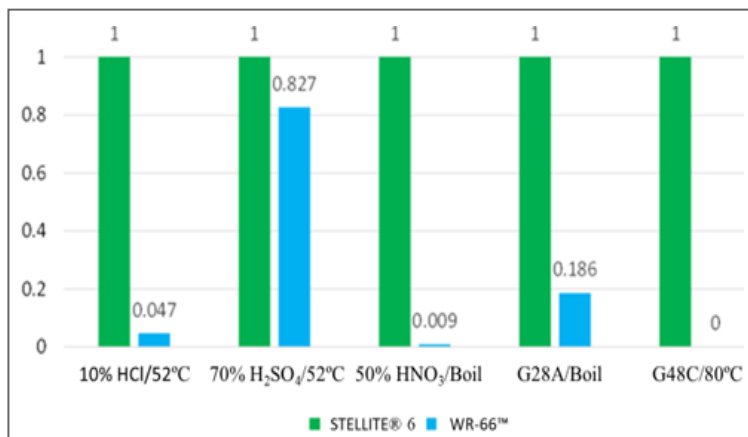
Nominal composition, wt%

Co	Cr	Mo	Fe	W	Ni	Mn	Si	N	Al	C
Bal.	27	5	3	2.5	1	1	0.3	0.125	0.1	0.065

Resistance to sliding wear – Wrought alloys

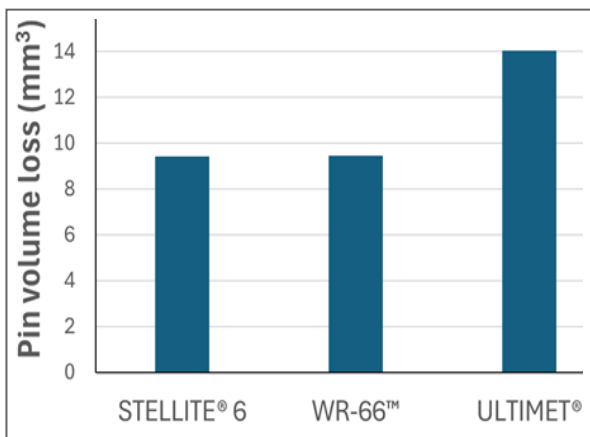


Corrosion Rate Comparison*

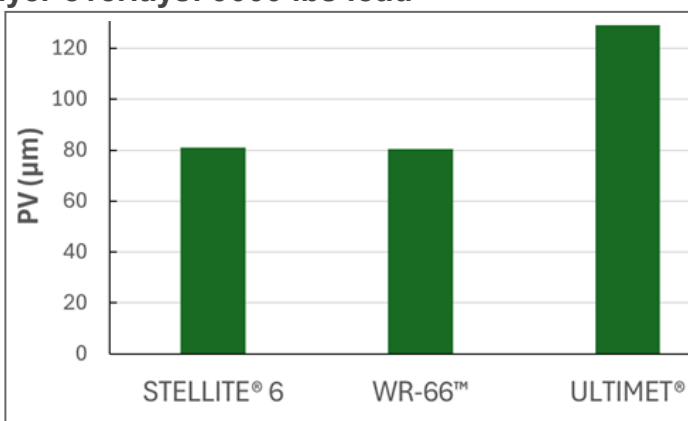
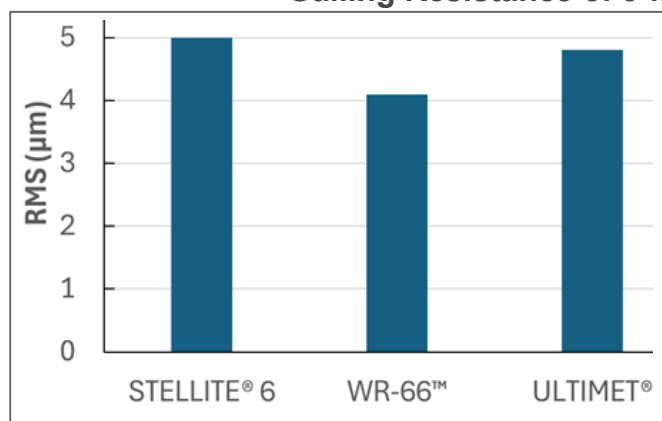


*STELLITE® 6 rates Normalized to 1 (Lower is Better)

Resistance to Sliding Wear: Overlays



Galling Resistance of 3-layer overlays: 9000 lbs load*



*Lower values imply greater wear resistance

Material is expected to be available for trial evaluation as manufacturing progresses. Planned product forms include sheet, plate, bar, weld wire, and powder.

For more information on HASTELLOY® WR-66™ alloy, please contact Brandon Furr at (832) 835-4681 or BFurr@haynesintl.com

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