ULTIMET® Wire

Product Description:

A cobalt-based, solid wire, ULTIMET® wire is used to weld ULTIMET® wrought products, and more importantly, to overlay and clad carbon and low-alloy steels. The weld deposits harden very quickly by cold working. In addition, it is very easy to deposit a “crack-free” layer without a butter layer. The RTW™ filler metal finish on the MIG-spooled wire promotes smooth feeding through welding equipment and reduce tip wear in contact tips.

Key Features:

- ULTIMET® wire easily produces crack-free weld deposits (over-matching weld overlays, weld inlays, and claddings).
- It is easier to weld with ULTIMET® wire than traditional cobalt-based alloys, allowing multiple layer build-ups with no pre-heating needed.
- ULTIMET® wire produces deposits which harden quickly through peening, machining, power hammering, burnishing, or hard particle impingement. This hardness creates a tough, ductile, wear-, corrosion-, and high-temperature resistant surface. The hardness of 30% cold-worked wrought product is approximately RC 50.
- ULTIMET® deposits exhibit extremely high resistance to metal to metal galling and seizing.
- The pitting resistance of ULTIMET® alloy in chloride solutions is equal to that of HASTELLOY® C-22HS® alloy, and is greater than that of C-276 alloy.

Applications:

- Valve component overlay
- “Make/break” seal welds in threaded unions
- Weld overlays to marine riser tensioners, shafts, and larger hydraulic system pistons
- Weld overlay to u-bends, piping and vales used in conveying sour crudes containing abrasives
- Slurry, rock, and acid tumblers and mixers
- Impellers
- Fiberglas manufacturing

Composition:

Cobalt:	Balance
Chromium:	23.5-27.5
Nickel:	7.0-11.0
Molybdenum:	4.0-6.0
Iron:	1.0-5.0
Tungsten:	1.0-3.0
Manganese:	0.10-1.5

Silicon:	0.5-1.0
Nitrogen:	0.03-0.12
Carbon:	0.02-0.10
Phosphorus:	0.030 max.
Sulfur:	0.020 max.
Boron:	0.015 max.

Specifications:

UNS R31233	-
DIN CoCr26Ni9Mo5W	-
DIN No. 2.4681	-

Minimal Mechanical Properties:

Tensile (psi)	133,000
Mpa	917
Elongation (%)	10

Available Product Forms and Sizes:

Diameter in	0.030	0.031	0.035	0.039	0.045	0.047	0.062	0.078	0.093	*0.125	*0.156x	*0.187x
Diameter mm	0.76	0.80	0.89	1.00	1.10	1.20	1.60	2.00	2.40	*3.20	*4.00x	*4.70x

Filler metals are available in MIG spools, TIG cut lengths, reels, and coils from the above diameters.

*****Size not available in MIG spools.

ËŸSize not available on reels.

Standard TIG straight lengths are available in 36” (914mm) lengths. *Other lengths available upon request*.