

## ULTIMET Alloy Tig

**CATEGORY** GMAW-GTAW Solid wires

**TYPE** Cobalt-based solid welding wire for hardfacing / rebuilding

**APPLICATIONS** Wire can be used to weld ULTIMET wrought products and 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 filler metal finish on the MIG wire is for a smooth feeding through welding equipment and reduces tip wear in contact tips.

**PROPERTIES** -ULTIMET wires 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 RC50. -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.

**CLASSIFICATION**

AWS	5.21: no class UNS R31233 ASTM: B815
DIN: W.Nr.	2.4681
DIN	CoCr26Ni9Mo5W

**SUITABLE FOR** •Valve component overlay •"Make/break" seal welds in threaded unions •Weld overlays to marine riser tensioners, shafts, and larger hydraulic systems pistons •Weld overlay to u-bends, piping and valves used in conveying sour crudes containing abrasives •Slurry, rock, and acid tumblers & mixers •Impellers •Fiberglass manufacturing

**APPROVALS** CE approved.

**WELDING POSITIONS:**



**TYPICAL ALL WELD METAL ANALYSIS**

Co	Cr	Ni	Mo	Fe	W	Mn	Si	N	C	P	S	B
Bal.	23.5-27.5	7.0-11.0	4.0-6.0	1.0-5.0	1.0-3.0	0.10-1.5	0.05-1.0	0.03-0.12	0.02-0.10	< 0.030	< 0.020	< 0.015

**MECHANICAL PROPERTIES**

Heat treatment	RP0,2 (N/mm2)	Rm (N/mm2)	A5 (%)	Impact energy (J) ISO-V			Hardness HRc / HV
				+20C	-40°C	-60C	
AW		>917	>10				

AW: as welded

**WELDING PARAMETERS / PACKING**

Welding Parameters			Packing (kg)	
D (mm)	Current (A) DC-		single	master
1,6 x 914	50-80		4,54	22,73
2.0 x 914	70-110		4,54	22,73
2.4 x 914	110-180		4,54	22,73

**REDRYING TEMPERATURE** not required

**GAS ACC. EN ISO 14175:** I1 (100%Ar)

