



410NiMoT Flux Cored Wire

U.S. ALLOY CO.
dba Washington Alloy
7010-G Reames Rd.
Charlotte, NC 28216
www.weldingwire.com

Quality Management System
in accordance with
ISO 9001
Cert # 05-R0925



ALLOY DESCRIPTION AND APPLICATION;

E410NiMoT-4 is a flux-cored wire for single or multipass welds on multi-pass welds on AISI types 403, 405, 410 and 420 and for welding CA-6NM castings stainless steels. E410NiMoT-4 is noted for its low spatter generation, excellent bead shape and appearance and ease of slag removal. It has very good deposit efficiency when used for flat and fillet welds of medium and heavy thickness plates. It has been designed to be used with 75- 80% Argon + 20-25% CO₂ mixed shield gas. USA E410NiMoT-4 provides hard as welded deposits with optimum abrasion resistance. When used as an overlay material cross-check cracking is to be expected as this is how the deposit stress relieves itself. E410NiMoT-4 is used extensively in the fabrication of 12% Cr, 4.5% Ni, and 0.5% Mo stainless steel structures. Typically, this alloy is used in fabricating and repairing hydroelectric turbines. When used to weld AISI types 404, 406 and 410 pre-heat and post-weld heat treatment is required. With correct procedures, hardness levels of less than 23 Rockwell C are possible. The deposit is fully martensitic and the hardness and tensile strength depend on the post-weld heat treatment procedures used. A Stress Relief (SR) of 600°C (1,115°F) for one hour is recommended to obtain maximum properties. TYPICAL WELD METAL CHEMISTRY (Tested with 80% Argon + 20% CO₂ Shield Gas)

TYPICAL WELDING PROCEDURES; DCEP

Wire Diameter	Wire Speed (ipm)	Amps	Volts	Electrical Stickout	CO ₂ (cfh)
0.045"	215-550	140-380	23-35	1/2-1"	35-50
1/16"	125-615	150-410	24-36	5/8-1.25 "	35-50

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.

CHEMISTRY (%) for Undiluted WELD METAL & PROPERTIES

	AWS Requirements)	Typical		(AWS Requirements)	Typical
Carbon	0.06	0.03	Molybdenum	0.40-0.70	0.59
Manganese	1.00	0.51	Phosphorus	0.04	0.014
Silicon	1.00	0.48	Sulfur	0.03	0.016
Chromium	11.0-12.5	11.98	Nickel	4.0-5.0	4.53
	AWS Requirements	As Welded		SR @ 600°C (1,115°F) for one hour	
Tensile Strength (psi)	110,000 min.	146,600		127,300	
Yield Strength (psi)	N/A	128,750		110,900	
Elongation	15% min.	19%		20%	

Iron balance and all single values are maximum percentages unless noted

AVAILABLE SIZES: TSF 410TNiMoT

Other sizes available – please inquire

SPECIFICATIONS; ANSI/AWS A5.22 E410NiMoT0-1/-4 or E410NiMoT1-1/-4
ASME SFA 5.22 E410NiMoT0-1/-4 or E410NiMoT1-1/-4
ASME F-6 , A-8

T0 = flat and horizontal: T1 = all position: -1 is for 100% CO₂; -4 = 75-80 Ar /CO₂

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