



# Techalloy 410

## Description

Techalloy 410 is used to weld Types 403, 405, 410 and 416. It is also used for welding overlay on carbon steels to resist corrosion, erosion and abrasion. This material, being of the air hardening type, calls for preheating of the joint to 350° F before welding. It is suitable for use against corrosion from atmosphere, fresh water, and mild acids.

NOTE: Mechanical properties listed below reflect utilization of post-weld heat treatment between 1350°F and 1400°F for one hour.

## Specifications & Approvals

AWS A5.9 ER410

UNS S41080

ISO 14343:2009 (13)

CWB

## Typical Chemical Composition

C	Mn	Si	Cr	Mo	Ni	Nb	N	S	P	Cu	FN (WRC)
.11	.45	.39	12.5					.010	.014		

## Typical Mechanical Properties

Tensile Strength	89,000 PSI	620 MPA
Yield Strength	78,500 PSI	540 MPA
Elongation	24%	

## Welding Parameters

	Shielding	Gas Flow	Diameter	Voltage	Amperage
Mig Welding	98/99% Argon + 2/1% Oxygen 97% Argon + 3% CO2	30 to 50 CFH	.035" (0.9mm)	26 to 29	160/210
			.045" (1.14mm)	28 TO 32	180/250
			.062" (1.6mm))	29 TO 33	200/280
Tig Welding	100% Argon				
Sub Arc Welding	Suitable flux may be used		3/32" (2.5mm)	28 to 33	275/350
			1/8" (3.14mm)	29 TO 32	350/450
			5/32" (4.0mm)	30 TO 33	400/550

## Standard Packages:

Mig Wire– 33# wire basket	Tig Wire– 10# tube/30# Master Carton	SAW– 60# Coil
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