



# Techalloy AK-10

## Description



Techalloy AK-10 is a low alloy steel welding wire developed for welding of high strength steels with adequate ductility at low temperatures. The hardness of the undiluted weld will be less than 235 BHN. The requirement of heat and inter-pass temperatures should be determined taking the base plate chemistry and thickness into consideration.

Note; Mechanical properties of welds listed below are greatly influenced by the preheat, inter-pass temperature, the heat input and the post-weld heat treatment.

## Specifications & Approvals

AWS A5.28 ER100S-G    A5.23 EG    UNS N/A    CWB    ASME QSC-395

## Typical Chemical Composition

C	Mn	Si	Fe	Cr	Mo	Ni	v
.12	1.45	.60	BAL	.30	.40	.95	

## Typical Mechanical Properties

Tensile Strength	104,000 PSI	720 MPA
Yield Strength	88,000 PSI	610 MPA
Elongation	25%	

## Welding Parameters

Process	Diameter	Voltage	Amperage	Gas
TIG	.035"	10-12	50-70	100% Argon
	.045"	10-12	70-100	100% Argon
	1/16"	12-15	100-125	100% Argon
	3/32"	15-20	125-175	100% Argon
	1/8"	15-20	175-250	100% Argon
MIG-Spray Transfer	.035"	28-32	165-200	98% Argon + 2% Oxygen 75% Argon + 25% CO <sup>2</sup> 100% CO <sup>2</sup>
	.045"	30-34	180-220	
	1/16"	30-34	230-260	
MIG-Short Circuiting Transfer	.035"	22-25	100-140	100% CO <sup>2</sup> *
	.045"	23-26	120-150	75% Argon + 25%CO <sup>2</sup>

## Standard Packages:

MIG- 33# Spool	TIG- 10# Can/30# Master Carton
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