

## Techalloy AK-10

### DESCRIPTION

Techalloy AK-10 is a low alloy steel welding wire developed for joining high strength steels with excellent ductility at low temperatures. Preheat and interpass temperatures are determined from base metal composition and section size. A hardness of 235 BHN maximum may be obtained on undiluted weld metal.

### SPECIFICATIONS & APPROVALS

**Quality Systems :**

ISO Q9001-2000

**Specifications :**

AWS/ASME SFA: A5.23 EG; A5.28 ER100S-G

UNS: N/A

European Standard: N/A

**Approvals**

### TYPICAL CHEMICAL COMPOSITION

C	Mn	Si	Fe	Cr	Ni	Cu	Mo	S / P	Al
0.12	1.45	0.60	Bal.	0.30	0.95	0.25	0.40	.01 / .01	0.005

### TYPICAL MECHANICAL PROPERTIES of WELD METAL

Tensile Strength	Yield Strength	Elongation 4d	Impact @ -75°F/ -59°C	Hardness BHN
104.0 Ksi	88.0 Ksi	25%	50 ft-lb	< 235
720 Mpa	610 Mpa			

### WELDING PARAMETERS

Process	Electrical	Voltage	Amperage	Shielding Gas	Gas Flow, CFH	Welding Speed
<u>GMAW</u> <i>Spray Transfer</i>	DCEP	28 - 32	.035" (0.90mm) 165-200	98 Ar - 2O <sub>2</sub>	30 - 50	30-50 IPM
		30 - 34	.045" (1.14mm) 180-220			
			.062" (1.60mm) 230-260			
<i>Short Circuit</i>	DCEP	22 -25	.035" (0.90mm) 100 - 140	75 Ar - 25CO <sub>2</sub>		
		23 - 26	.045" (1.14mm) 120 -150			
<i>Globular</i>				100% CO <sub>2</sub>		
<u>GTAW</u>	DCEN	20	.093" (3.20mm) 125-175	100% Ar	30 - 40	
			.125" (3.20mm) 175-250			
<u>SAW</u>	DCEP	28	3/32" (2.50mm) 400	N/A	N/A	110 IPM
			1/8" (3.14mm) 450			80 IMP
			5/32" (4.00mm) 500			65 IPM