PRODUCT DATA SHEET

Stainless Steel Bare Wire

Weld Process: Used for Mig, Tig, & Submerged Arc

Alloy: 330 Class: ER330

Conforms to Certification: AWS A5.9 / ASME SFA 5.9

Alloy: DM330

PRODUCT DATA SHEET

AWS Chemical Composition

C = 0.18 – 0.25	Si = 0.30 – 0.65
Cr = 15.0 – 17.0	P = 0.03 max
Ni = 34.0 – 37.0	S = 0.03 max
Mo = 0.75 max	Cu = 0.75 max
Mn = 1.0 – 2.5	

Deposited Chemical Composition % (Typical)

C = 0.23		Mo = 0.10	P = 0.014
Cr = 15.95	Mn = 1.95	S = 0.005	
Ni = 35.20	Si = 0.42	Cu = 0.15	

Deposited All Weld Metal Properties

Data is typical for ER330 weld metal deposited by mig using argon + 2% oxygen and tig using 100% argon as the shielding gas. Data on sub-arc is dependent on the type of flux used.

Mechanical Properties R.T.

Tensile Strength	84,000psi
Yield Strength	56,500psi
Elongation	29%

Application

ER330 is used to weld cast and wrought material of similar chemical composition. The weld metal provides excellent heat and scale resistance up to 1800ºF. However, high sulfur environments may adversely affect elevated temperature performance. This being a fully austenitic alloy, low heat input is necessary

Recommended Welding Parameters

GMAW "Mig Process" Reversed Polarity

Wire Diameter	Wire Feed	Amps	Volts	Shielding Gas	Gas CFH
Short Arc Welding					
.030	13-26	40-120	16-20	Argon+2% O_2	25
.035	13-26	60-140	16-22	Argon+2% O_2	25
Spray Arc Welding					
.035	20-39	140-220	24-29	Argon+2% O_2	38
.045	16-30	160-260	25-30	Argon+2% O_2	38
1/16	10-16	230-350	27-31	Argon+2% O_2	38

GTAW "Tig Process"

Wire Diameter	Amps DCEN	Voltage	Gases
.035	60-90	12-15	Argon 100%
.045	80-110	13-16	Argon 100%
1/16	90-130	14-16	Argon 100%
3/32	120-175	15-20	Argon 100%

Note: Parameters for tig welding are dependent upon plate thickness and welding position.

Other shielding Gases may be used for Mig and Tig welding. Shielding gases are chosen taking Quality, Cost, and Operability into consideration

Submerged Arc Welding
Reverse Polarity is suggested

Wire Diameter	Amps	Volts
3/32	250-450	28-32
1/8	300-500	29-34
5/32	400-600	30-35
3/16	500-700	30-35

Both Agglomerated and fused fluxes can be used for submerged arc welding.
Note: The chemical composition of the flux mainly affects the chemistry of the weld metal and consequently its corrosion resistance and Mechanical properties.