

Technical Data Sheet

WT Al Bronze 4

ERCuNiAl

A5.7



ERCuNiAl is a nickel-aluminum bronze spooled wire, bare rod and coated electrodes were developed for the welding of cast and wrought nickel-aluminum bronze. ERCuNiAl is also recommended for weld repairing NiBral boat propellers.

ERCuNiAl Coated Limiting

Chemical Composition, %

(deposited weld metal)

Copper*	Balance
Aluminum	8.50-9.50
Iron	3.0-6.0
Nickel	4.0-6.0
Manganese	0.50-3.50
Silicon	1.5 max.
Others	0.50 max.

*including silver

Mechanical Properties

(Nominal all-weld metal values)

Tensile Strength, ksi	99 (683 MPa)
Yield Strength, ksi	58 (400 MPa)
Elongation, % in 2" (51 mm)	25
Reduction of Area, %	22
BHN (3000kg.)	
1/4" (6.4 mm) deposit	187

Specifications

AWS A5.6 Class E CuNiAl

ASME SFA 5.6 Class E CuNiAl

Typical Applications

Ship fittings	Ship propellers
Power plant valves	Piping systems
Intake screens	Welding Base Alloy 483
Welding Base Alloy 45	
Oil recovery pumps	
Propeller gear housings	
Marine propulsion systems	

ERCuNiAl Bare Limiting

Chemical Composition, %

(filler metal)

Copper*	Balance
Aluminum	8.50-9.50
Iron	3.0-5.0
Nickel	4.0-5.50
Manganese	0.60-3.50
Silicon	0.10 max.
Others	0.50 max.

*including silver

Mechanical Properties

(Nominal all-weld metal values)

Tensile Strength, ksi	104 (718 MPa)
Yield Strength, ksi	59 (407 MPa)
Elongation, % in 2" (51 mm)	23
Reduction of Area, %	22
BHN (3000kg.)	
1/4" (6.4 mm) deposit	196

Specifications

AWS A5.7 Class ER CuNiAl

ASME SFA 5.7 Class ER CuNiAl

*MIL-E-23765/3A Type MIL-CuNiAl

