Technical Data Sheet
AMPCO-CORE® 250S

Description and Application

AMPCO-CORE® 250S is a nickel aluminum bronze metal core wire for use with the Gas Metal Arc Welding process producing sound, pore free deposits.

AMPCO-CORE® 250S is primarily an overlay filler metal for aluminum bronzes and ferrous materials. The characteristics of this filler metal make a good choice for overlaying components used in bearing applications where very high pressures are encountered operating against hardened steel surfaces.

AMPCO-CORE® 250S is especially suited for marine environments due to its Ni content which increases corrosion resistance in brackish seawater. It also exhibits resistance to cavitation and stress corrosion.

Typical Applications

Shafts, guide grooves, marine applications, overlaying steel parts without a buffer layer

Limiting Chemical Composition

% (filler metal)

Copper	balance
Aluminum	11.5
Nickel	4.8
Iron	2.0
Manganese	1.0

Mechanical Properties*

(nominal all-weld metal value)

BHN (3000kg.)

three layer deposit on mild steel……..320

**Hardness will vary depending on quality of the weld and experience and knowhow of the welder.*

Product availability and packaging

AMPCO-CORE® 250S is available in two diameters: 0.045” (1.2mm) and 0,062” (1.6mm). Both sizes are available in 12" (300mm) spools weighing 33lb (15 kg) each. Other diameters are available upon request.

Welding position and deposits

Flat position welding is recommended. Backhand (trailing) welding is preferred rather than forehand (pushing) to make either stringer or weaved beads.

Shielding gas

100% Argon

Operating conditions

Current type

DC+ (DCEP), continuous or pulsed

Gasflow rate

25 - 42 cfh (12-20 L/min)

Intensity [A]

0.045" (1.2 mm)	150-320
0.062" (1.6 mm)	200-350

Voltage [V] (all diameters)

Continuous	27-31
Pulsed	22-25

Stick-out [inch (mm)]

All diameters	5/8"- 3/4" (10-20)

NB. Higher intensities and voltages can be used but will result in increased element burn-off (particularly Al) and dilution, leading to lower hardness levels. Preheating and working temperatures of up to 300°C are recommended to avoid cracking.