

SIL-TRODE®

Silicon-Bronze

Classifications

AWS A5.7 Class ER CuSi-A

Description

- A silicon bronze welding alloy (UNS C65600) for the inert gas welding of copper-silicon, copper zinc, copper to copper and also mild steel. Used extensively in the welding of galvanized steel. The silicon content of 2.8-4% increases the tensile strength, hardness and work hardening rates.
- Silicon bronze also provides good corrosion resistance and has good weldability.
- With gas metal-arc welding, the weld metal should be deposited in stringer beads, maintaining a small molten pool to avoid overheating the hot short silicon bronze base metal. Use argon gas for shielding and relatively high welding travel speeds.
- Preheat slightly to remove moisture.
- Interpass temperature should not exceed 66 °C.



Limiting chemical composition of all-weld metal (%)

Cu*	Si	Zinc	Tin	Mn	Fe	Al	Pb	Others
Rem.	2.8-4.0	1.0 max.	1.0 max.	1.5 max.	0.50 max	0.01 max.	0.02 max.	0.05 max.

Mechanical properties (nominal all-weld metal values)

	Y.S. (MPa)	T.S. (MPa)	El. (% in 51mm)	BHN (500 kg) (6.4 mm deposit)
Example	-	350	40	80

Sizes available

Diameter	(mm)	1.6	2.4	3.2
Length	(mm)	914	914	914
Tube size	(kg)	4.5	4.5	4.5

Recommended welding parameters

Refer to AMPCO® welding products brochure or website for recommended welding parameters.