

SM-CuSi A

AWS A5.7/ ASME SFA5.7 ERCuSi-A

HYUNDAI WELDING CO., LTD.



❖ PRODUCT SPECIFICATIONS

AWS A5.7/ ASME SFA5.7 ER CuSi-A

❖ APPLICATIONS

Use for welding of Silicon Bronze Copper, or Aluminum Bronze of low aluminum content. It can also be used for brazing malleable iron and light gauge steel.

❖ CHARACTERISTICS ON USAGE

HWC Silicon Bronze is a copper based filler metal that contains 3% Silicon and trace amounts of manganese, tin and zinc. It is used primarily for oxyacetylene welding of copper, copper-silicon and copper-zinc metals to themselves and to steel. HWC Silicon Bronze is excellent for plain or galvanized steel sheet metal as well as other coated steels. It is also used for surfacing areas that are subjected to corrosion. The Oxyacetylene gas flame should be slightly oxidizing. Keep the weld puddle small in order to promote fast solidification and minimize cracking. A high boric acid flux should be used both before and during welding. Preheat is NOT recommended.

❖ SHIELDING GAS

Ar, Ar+He

❖ TYPICAL WELDING CURRENT

GMAW : DC+

❖ PACKING

SM-CuSi A (GMAW)	Size(mm)	0.8	0.9	1.0	1.2
	Weight	Spool : 1kg, 5kg, 12.5kg, 15kg			



Chemical Composition of Wire & Mechanical Properties

❖ Typical Chemical Composition of Wire(wt%)

Brand Name	Cu	Al	Fe	Mn	Pb	Si	Sn	Zn	Other
SM-CuSi A	Bal	0.002	0.02	0.89	0.004	2.91	0.005	0.003	-
AWS A5.7 ERCuSi-A	Bal	<0.01	<0.5	<1.5	<0.02	2.8 ~4.0	<1.0	<1.0	<0.5

❖ Tensile Strength of Wire

Brand Name	T.S. (N/mm ²)	CAST(mm)	Helix(mm)
SM-CuSi A	950	350	25

❖ Mechanical Properties of All-Weld Metal (Shielding Gas : 100%Ar)

Brand Name	Tensile Test Results.	
SM-CuSi A	T.S. (N/mm ²)	EL. (%)
	345	45



TYPICAL GMAW WELDING PARAMETERS (DC Reverse Polarity; Electrode Positive Spray Transfer)

Diameter(mm)	Amperage(A)	Volts(V)
0.8	130~150	21~23
0.9	140~190	23~25
1.0	150~200	24~26
1.2	200~220	26~28