

SM-80G

2021.03



❖ Specification

AWS A5.28/ ASME SFA5.28 ER80S-G

JIS Z3312 G 59J A 1 U C 3M1T

EN ISO 14341-B G 57A 5 C1 S3M1T

❖ Applications

Butt and fillet welding of steel structures and using 550MPa tensile steels such as construction machinery, building and pressure vessels

❖ Characteristics on Usage

SM-80G is a solid wire for flat and horizontal fillet welding position. As the deposition rate is very high, highly efficient welding can be performed.

As the wire contains special elements, its bead appearance is excellent.

❖ Note on Usage

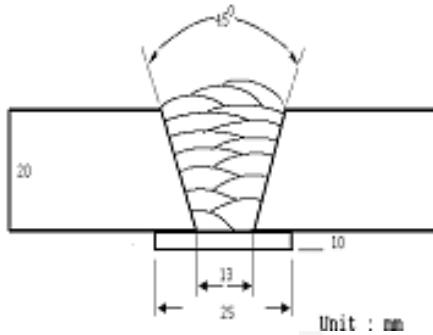
1. Use with CO₂ gas.
2. Flow rate of shielding gas is 25ℓ/min. approximately.
3. Use wind screen against wind.
4. Keep distance between tip and base metal 6~15mm for less than 250A, and 15~25mm for more than 250A of welding current.



Mechanical Properties of All Weld Metal & Chemical Composition

❖ Welding Conditions

Method by AWS Rules



[Joint Preparation & Layer Details]

Diameter(mm)	: 1.2mm (0.045in)
Shielding Gas	: 100%CO ₂
Flow Rate(l /min.)	: 20
Amp./ Volt.	: 280 / 32
Stick-Out(mm)	: 20~25
Pre-Heat(°C)	: R.T .
Interpass Temp.(°C)	: 150±15
Polarity	: DC(+)

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test Results			Charpy V-Notch Impact Value J (ft . lbs)	
	YS MPa(ksi)	TS MPa(ksi)	EL (%)	-30°C (-22°F)	-50°C (-58°F)
SM-80G	570 (82.7)	642 (93.1)	28.0	94 (70)	37 (27)
AWS A5.28 ER80S-G	-	≥ 550	-	As agreed between supplier and purchaser	

❖ Chemical Composition(Wt%)

ITEM	C	Si	Mn	P	S	Mo
Wire	0.05	0.76	1.91	0.013	0.003	0.28
Weld metal	0.05	0.53	1.39	0.009	0.002	0.24
AWS A5.28 ER80S-G	Not Specified					

This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of HYUNDAI WELDING CO., LTD. affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, shielding gas, plate chemistry and temperature, weldment design, fabrication methods and service requirements.



Proper Welding Condition

❖ Proper Current Range

Consumable	Welding Position	Wire Dia. (mm-inch)		
		1.2-0.045	1.4-0.052	1.6-1/16
SM-80G	Flat	200~350A	250~450A	300~550A
	H-Fillet	200~350A	250~450A	300~550A
	Vertical Up	100~180A	-	-

Notice

This test report is made for giving general information, and it's not meaning guarantee.

Test results are changeable by several welding - parameter including base materials