

SM-310

2020.09



❖ Specification

AWS A5.9	ER310
JIS	Z3321 YS310
EN	ISO 14343-A G 25 20

❖ Applications

MIG welding of 25%Cr-20%Ni steel.

❖ Characteristics on Usage

SM-310 is a welding consumable for MIG welding. The structure of the weld metal is all austenite. Resistance to corrosion and heat of weld metal is excellent. Elongation of weld metal is extremely good.

❖ Note on Usage

Use 100% Ar or Ar + 2%O₂ gas.

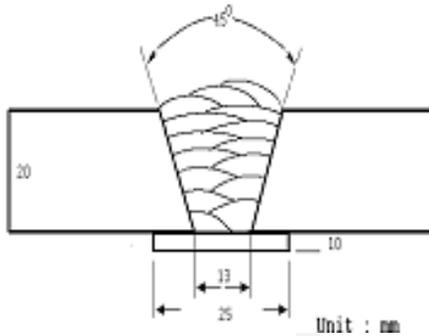
❖ Packing

Dia.	0.8mm (0.033in)	0.9mm (0.035in)	1.0mm (0.040in)	1.2mm (0.045in)	1.6mm (1/16in)
Spool	12.5kg (28lbs)				



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions



[Joint Preparation & Layer Details]

- Diameter(mm)** : 1.2mm
- Shielding Gas** : 100%Ar
- Flow Rate(ℓ /min.)** : 15~20
- Amp./ Volt.** : 230/27
- Stick-Out(mm)** : 20
- Pre-Heat(°C)** : R.T.
- Interpass Temp.(°C)** : 150 ± 15
- Polarity** : DC(+)

❖ Mechanical Properties of All weld metal(wt%)

Consumable	Tensile Test		CVN Impact test Joule (ft·lbs)	
	T.S. MPa (ksi)	EL. (%)	-60°C (-76°F)	-196°C (-320.8°F)
SM-310	540 (79)	34.8	134 (99)	99 (73)

❖ Chemical Analysis of the wire

Consumable	C	Si	Mn	Ni	Cr
SM-310	0.09	0.35	1.90	20.9	26.8
AWS A5.9 ER310	0.08 ~0.15	0.30 ~0.65	1.0 ~2.5	20.0 ~22.5	25.0 ~28.0

❖ Chemical Analysis of the weld metal

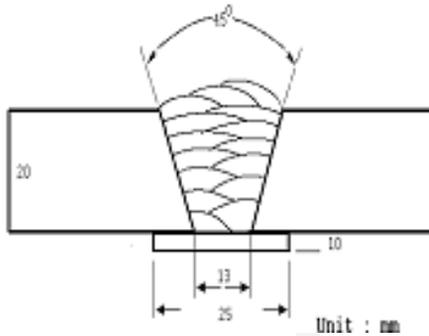
Consumable	C	Si	Mn	Ni	Cr
SM-310	0.09	0.40	1.56	20.89	25.94

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.



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions



[Joint Preparation & Layer Details]

- Diameter(mm)** : 1.2mm
- Shielding Gas** : Ar + 2%O₂
- Flow Rate(ℓ /min.)** : 15~20
- Amp./ Volt.** : 230/27
- Stick-Out(mm)** : 20
- Pre-Heat(°C)** : R.T.
- Interpass Temp.(°C)** : 150 ± 15
- Polarity** : DC(+)

❖ Mechanical Properties of All weld metal(wt%)

Consumable	Tensile Test		CVN Impact test Joule (ft·lbs)	
	T.S. MPa (ksi)	EL. (%)	-60°C (-76°F)	-196°C (-320.8°F)
SM-310	538 (78)	34.8	119 (88)	94 (70)

❖ Chemical Analysis of the wire

Consumable	C	Si	Mn	Ni	Cr
SM-310	0.09	0.35	1.90	20.9	26.8
AWS A5.9 ER310	0.08 ~0.15	0.30 ~0.65	1.0 ~2.5	20.0 ~22.5	25.0 ~28.0

❖ Chemical Analysis of the weld metal

Consumable	C	Si	Mn	Ni	Cr
SM-310	0.09	0.39	1.51	20.91	25.64

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