

ST-312

2021.06



❖ Specification

AWS A5.9	ER312
JIS	Z 3321 YS312
EN	ISO 14343-A W 29 9

❖ Applications

TIG welding of 29%Cr-9%Ni steel.

❖ Characteristics on Usage

ST-312 is a filler rod for TIG welding with pure Ar gas.

❖ Note on Usage

Use 100% Ar

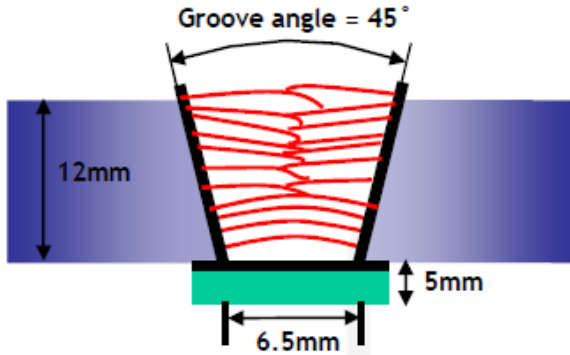
❖ Packing

Dia.	1.6mm (1/16in)	2.0mm (5/64in)	2.4mm (3/32in)	2.6mm (0.10in)	3.2mm (1/8in)
TIG	5kg (11lbs)				



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions



[Joint Preparation & Layer Details]

Diameter(mm)	: 3.2mm
Shielding Gas	: 100%Ar
Flow Rate(ℓ /min.)	: 20~25
Amp./ Volt.	: 160~240 /
Pre-Heat(℃)	: R.T.
Interpass Temp.(℃)	: 150 ± 15
Polarity	: DC(-)

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact test Joule (ft·lbs)	
	TS MPa (ksi)	EI (%)	20℃ (68°F)	-20℃ (-4°F)
ST-312	814 (118)	18.8	67 (50)	54 (40)

❖ Chemical Analysis of the wire(wt%)

Consumable	Chemical Composition (wt%)				
	C	Si	Mn	Ni	Cr
ST-312	0.10	0.38	1.68	8.8	30.0
AWS A5.9 ER312	≤0.15	0.30 ~0.65	1.0 ~2.5	8.0 ~10.5	28.0 ~32.0

❖ Chemical Analysis of All weld metal(wt%)

Consumable	Chemical Composition (wt%)				
	C	Si	Mn	Ni	Cr
ST-312	0.10	0.39	1.67	7.51	27.03

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.