T-80SNi1

(Low Temperature Steel 1% Ni TIG ROD)

KISWEL

Rev.0

T-80SNi1

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■ Description & Application

- **It is designed for welding of 550MPa high tensile steel for low temperature service above -45℃.**
- **Suited for welding 1% Ni steel and other low temperature for low temperature pressure vessel, tank and pipe.**
- **GTAW rod for welding of low temperature equipment and structure.**

■ Classification

- **AWS A5.18-2005 : ER80S-Ni1**
- **EN ISO 14341-A : W 46 6 M G3Ni1**

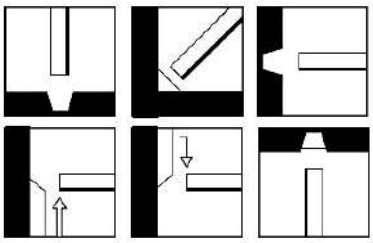
■ Typical Chemical Composition of Wire (%)

	C	Si	Mn	P	S	Ni
AWS ER80S-Ni1	≤0.12	0.40-0.80	≤1.25	≤0.025	≤0.025	0.80-1.10
EN ISO G3Ni1	0.06-0.14	0.50-0.90	1.00-1.60	≤0.020	≤0.020	0.80-1.50
T-80SNi1	**0.09**	**0.63**	**1.11**	**0.009**	**0.008**	**0.83**

■ Shielding Gas

- **100% Ar (15~25ℓ/min)**

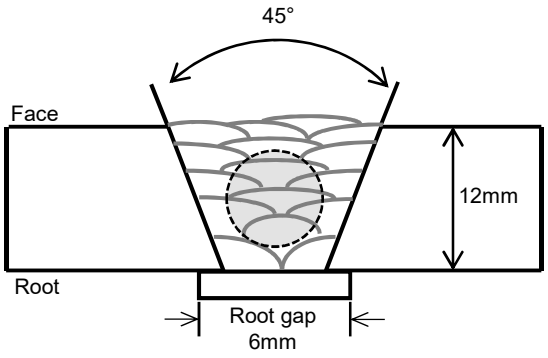
■ Welding Position



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■ All Weld Metal Test Specimen



Base metal	A515 Gr.70 Buttering
Diameter	2.4mm
Current / Voltage	240A / 15V
Travel Speed	12 CPM
Welding Position	PA / 1G

■ Typical Mechanical Properties of Weld Metal

	Shielding Gas	PWHT	Y.S (MPa)	T.S (MPa)	El. (%)	IV (J) (Joule @ Temp)
AWS ER80S-Ni1	-	AW	≥ 470	≥ 550	≥ 24	≥ 27 @ -45℃
EN ISO G3Ni1	Ar	AW	≥ 460	530~680	≥ 20	≥ 47 @ -60℃
T-80SNi1	**Ar**	**AW**	**575**	**641**	**34**	**327 @ -45℃ 166 @ -60℃**
T-80SNi1	**Ar**	**PWHT**	**531**	**592**	**25**	**180 @ -50℃**

※ PWHT : 610℃, 1Hrs

■ Typical Operating Procedures

Dia (mm)	Current (amps)	Voltage (volt)
0.9, 1.0	50-80	10-12
1.2	70-120	10-12
1.6	90-170	11-16
2.4	100-200	13-20
3.2	120-250	13-22

※ Polarity : DCEN

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■ Packaging





■ Size and Weight

Dia. (mm)	0.9, 1.0, 1.14, 1.2, 1.6, 2.0, 2.4, 3.2, 4.0, 4.8
Weight (kg)	4.5(10lb), 5
Length (mm)	914(36″), 1000
Packaging	Paper or Plastic Can

■ Approval

Shielding gas	ABS	BV	DNV・GL	LR	KR	RS
Argon	2Y	4Y	IV YM	4Ym	4YSG(I)	4Y

■ Handling & Storage

• Do not speed up or brake loaded products to prevent rollover during transport.
• Please run out product within two weeks of its packaging release.
• If the product is discontinued for more than two weeks, it should be packed and stored separately to prevent air contact.
• Store the product without removing the packaging to prevent air contact.
• To prevent product packaging damage and condensation due to moisture. Keep the product at a relative humidity of less than 50%

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The Management System of KISWEL LTD, 704, Gongdan-ro, Seongsan-gu, Changwon-si, Gyeongnam 51544, Republic of Korea, 70, Saebyeok-ro 63beon-gil, Sasang-gu, Busan 47018, Republic of Korea has been approved by Lloyd's Register Quality Assurance to : IATF 16949:2016, ISO 14001:2015, applicable to : Manufacture of solid welding wires & rods, flux cored wires, submerged arc welding wires & fluxes, stainless steel welding wires & rods and covered electrodes.
More information : www.kiswel.com

