ZO-26

SOLID WELDING WIRE
FOR 490MPa GRADE STEEL

KISWEL

Rev.0

ZO-26/KC-26

■ Description & Application

- **This wire produces good weld quality when welded for most carbon steels with CO2 & mixture shielding gas in short circuit or globular transfer**
- **Excellent defect resistant on high heat input**
- **Possible to achieve higher productivity due to low spatter and deep penetration**
- **Beautiful weld appearance on flat or horizontal welding position**
- **Construction machinery, Vehicles, Structural steel, ship-building, bridges**

■ Classification

- **AWS A5.18-2005 : ER70S-G**
- **KS D 7025-2005 : YGW11**
- **JIS Z 3312-2009 : YGW11**
- **EN ISO 14341-A : G 46 2 C1 Z**
  : G 46 2 M21 Z
- **EN ISO 14341-B : G 49 A 2 C1 S11**
  : G 49 A 2 M21 S11

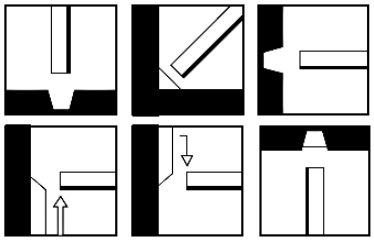
■ Typical Chemical Composition of Wire (%)

	C	Si	Mn	P	S	Ti	Cu
EN ISO S11	0.02-0.15	0.55-1.10	1.40-1.90	≤0.030	≤0.030	0.02-0.30	≤0.50
JIS YGW11	0.02-0.15	0.55-1.10	1.40-1.90	≤0.030	≤0.030	0.02-0.30	≤0.50
ZO-26/KC-26	**0.06**	**0.80**	**1.53**	**0.014**	**0.010**	**0.18**	**0.10-0.35**

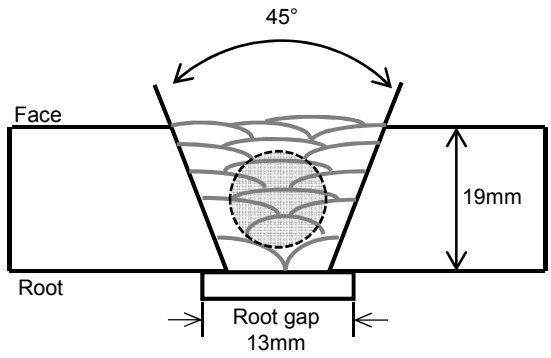
■ Shielding Gas

- **100% CO_2 (15~25ℓ/min)**
- **Ar + 15 ~ 25%CO_2 (15~25ℓ/min)**

■ Welding Position



All Weld Metal Test Specimen



Base metal	A515 Gr.70
Diameter	1.2mm
Current / Voltage	280A / 30V
Stick out	20mm
Travel Speed	30 CPM
Welding Position	PA / 1G

Typical Mechanical Properties of Weld Metal

	Y.S (MPa)	T.S (MPa)	El. (%)	IV (J) (Joule @ Temp)	Shielding Gas	PWHT
AWS ER70S-G	≥ 400	≥ 480	≥ 22	-	-	AW
EN ISO S11	≥ 390	490~670	≥ 27	≥ 47 @ -20℃	-	AW
ZO-26/KC-26	**490**	**570**	**30**	**110 @ -20℃**	**100%CO_2**	**AW**
ZO-26/KC-26	**520**	**590**	**31**	**120 @ -20℃**	**Ar + 20%CO_2**	**AW**

Typical Operating Procedures

Dia (mm)	Shielding Gas	Current (amps)	Voltage (volts)	Feed speed (m/min)	Melt-off Rate (Kg/Hrs)
1.2	100% CO_2	140-200	19-21	3.0-5.0	1.4-2.3
	Ar + 20% CO_2	280-340	27-30	8.5-12.5	4.2-6.2
1.4	Ar + 20% CO_2	300-440	30-34	7.5-12.5	5.1-8.5
1.6	Ar + 20% CO_2	320-440	28-32	5.5-7.5	4.9-6.7

* Polarity : DCEP (DC+)

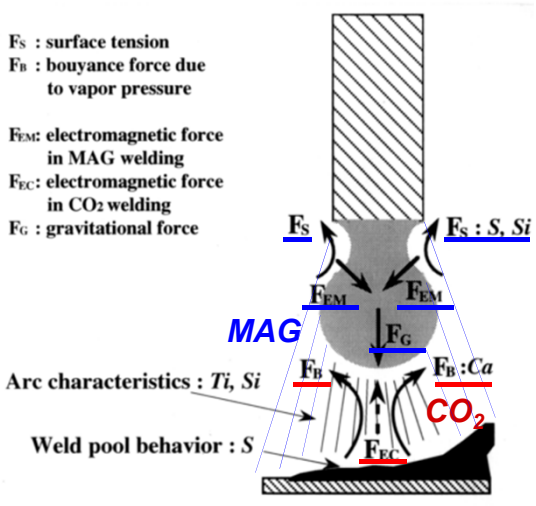
■ Wire surface

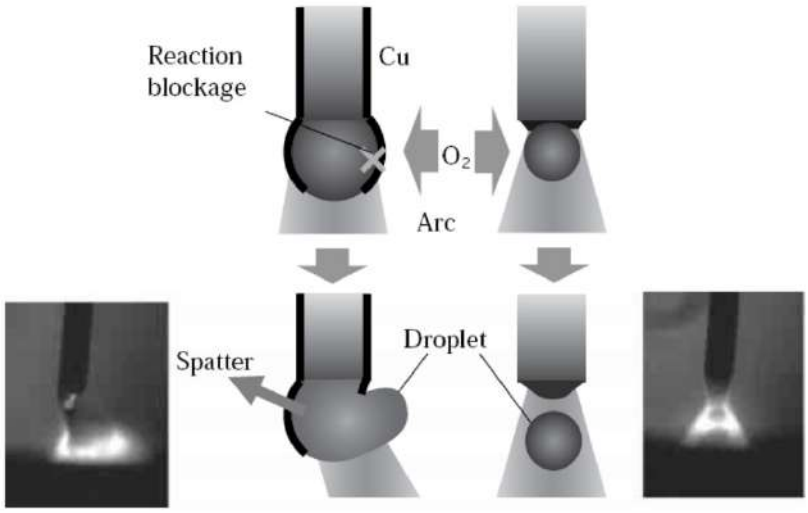
	KC-26 (Skin Pass)	ZO-26 (R2)	ZO-26
Wire Appearance			
Cu Adhesive			
	Less Cu / Rough surface	Less Cu	Basic

※ Various surfaces are provided according to the customer's environment to improve wire feeding

■ Low Cu plated

- **Various forces are applied to the melting edge of the wire at the Arc**
- **Excessive Cu-plate prevents penetration of oxygen and maintains surface tension**
- **Because of maintained surface tension, The size of droplet is increase, this increases the generation of spatter**





■ Welding wire feeding

- **Welding wire is fed by feed system**
- **If feeding is not stable, the arc length is changed. It makes problems.**
- **A stable feeding requires the proper configuration of the welding system and the selection of the product with the appropriate level of surface roughness**

■ Wire feed system

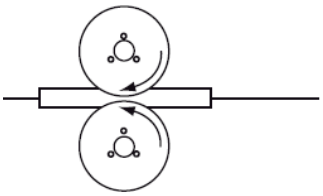


Push system for normal GMAW wire

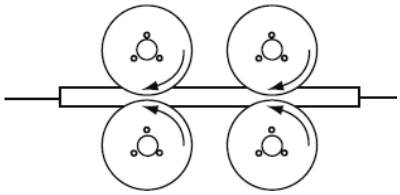


Push/Pull system for soft GMAW wire (Aluminum)

■ Drive rollers



Two roll feeder



Four roll feeder

■ Bead appearance (H-fillet)

Mode	Current (A)	Voltage (V)	Travel SP (CPM)	Base Metal	Thickness (mm)	Stick out (mm)	Shielding Gas
Inverter	300	30	40	SM490	19	20	100 %CO2

KC-26 (Skin Pass)	
ZO-26	
ZO-26 (Ar+20%CO2)	

ZO-26/KC-26

■ Packaging



■ Size and Weight

Dia. (mm)	1.14, 1.2, 1.4, 1.6, 2.0		
Weight (kg)	15, 20		100~450
Packaging	Plastic Spool	Wire Basket	Pail-pack / DPP

■ Approval

Shielding gas	ABS	BV	DNV GL	LR	KR	NK
CO2	3YSA	SA3YM	III YMS	3YS H15	3YSG	KSW53G
MIX	-	-	-	-	-	KSW53G

* Remark : RS, KS, JIS

■ Handling

- **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.**
- **Products that are in use on the supply line must be prevented by covering to prevent product contamination and electric shock accidents.**
- **When using Drum or DPP, check the enclosed installation and handling manual, and use it after proper installation.**

■ Storage

- **Do not stock Drum or DPP packaging palettes more than 2 layers and Spool or Wire basket packaging palettes more than 3 layers. To prevent damage to the products and external packaging.**
- **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%.**

KISWEL

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

