

## WELDSKILL 70S SERIES

### PRODUCT DATA SHEET



**COPPER COATED,  
LOW CARBON STEEL  
FILLER ROD**



### GAS AND TIG WELDING CONSUMABLES

#### WELDSKILL 70S SERIES

- Copper Coated, Low Carbon Steel Rod for Gas TIG & Oxy Welding Applications.
- End stamped with "ER70S-2, ER70S-4, ER70S-6" for easy I.D.
- Resealable 5kg recyclable plastic tube.

#### CLASSIFICATIONS:

AS 1167.2:	R2	R4	R6
AWS/ASME-SFA A5.18:	ER70S-2	ER70S-4	ER70S-6
ISO 636-A:	W 42 3 2Ti	W 38 3 3Si1	W 38 5 3Si1

#### JOINING PROCESS:

Gas (Fusion) and Gas Tungsten Arc (TIG) welding.

#### TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

	R2	R4	R6
Yield Stress	425 MPa	400 MPa	400 MPa
Tensile Strength	520 MPa	500 MPa	500 MPa
Elongation	34%	29%	29%
CVN Impact Values	50J av @ -29°C	100J av @ -20°C	100J av @ -46°C

## DESCRIPTION AND APPLICATIONS:

WeldSkill 70S Series Filler Rods are a copper coated, low carbon steel filler rod suitable for the oxy-acetylene (fusion) welding and Gas Tungsten Arc (TIG) welding of a wide range of mild and medium strength steels.

WeldSkill 70S Series Filler Rods are recommended for the TIG welding of steel pipes, plates and castings with a tensile strength in the 500 MPa class. They are tolerant to surface rust and mill scale and are ideal for root pass welding applications where tough and ductile welds are produced.

When using WeldSkill 70S Series Filler Rods for gas welding applications a neutral to slightly reducing flame setting is recommended.

### PROCEDURE FOR GAS (OXY-ACETYLENE) WELDING:

1. Thoroughly clean all areas to be welded.
2. Adjust flame to a neutral setting.
3. Preheat thicker joint sections.
4. Heat a small area of the joint until molten and progressively add Comweld High Test filler rod to the weld pool. Ensure the rod is melted by the molten weld pool and not the flame.
5. Allow completed joint to cool and remove residual scale by grinding, or wire brushing.

### PROCEDURE FOR GAS TUNGSTEN ARC (TIG) WELDING:

1. Thoroughly clean all areas to be joined.
2. For the butt welding of thick plates, bevel edges to 60°-70° included angle.
3. Use a Ceriated tungsten electrode, ground to a sharp needle point making sure the grinding lines run with the length (longitudinally) of the electrode's axis. The length of the needle point should be approximately 2-3 x the diameter of the tungsten electrode.
4. Use Direct Current Electrode Negative (DC-) and Welding Grade Argon.
5. Preheat thick sections prior to welding. Heat a spot on the base metal until it shows signs of melting and progressively add the filler rod to the weld pool.

## PACKAGING DATA:

PART NO.	DESCRIPTION	ROD SIZE (MM)	PACK WEIGHT / TYPE	APPROXIMATE RODS / KG	
WTS25016	WeldSkill 70S-2 TIG Rods	1.6 x 1000	5kg Pack	64	
WTS25024	WeldSkill 70S-2 TIG Rods	2.4 x 1000	5kg Pack	29	
WTS45016	WeldSkill 70S-4 TIG Rods	1.6 x 1000	5kg Pack	64	
WTS45024	WeldSkill 70S-4 TIG Rods	2.4 x 1000	5kg Pack	29	
WTS65016	WeldSkill 70S-6 TIG Rods	1.6 x 1000	5kg Pack	64	
WTS65024	WeldSkill 70S-6 TIG Rods	2.4 x 1000	5kg Pack	29	

## TYPICAL ROD ANALYSIS:

	ER70S-2	ER70S-4	ER70S-6
C:	0.06%	0.08%	0.07%
Mn:	1.08%	1.16%	1.55%
Si:	0.52%	0.75%	0.88%
S:	0.007%	0.010%	0.012%
P:	0.008%	0.015%	0.015%
Ti:	0.08%	-	-
Zr:	0.07%	-	-
Al:	0.08%	-	-
Fe:	Balance	Balance	Balance

## COMPARABLE CIGWELD PRODUCTS:

Autocraft LW1-6 GMAW wire  
AWS A5.18: ER70S-6

