

COMWELD LW1



- ▲ **Copper Coated, Low Carbon Steel Rod for Gas Tungsten Arc Welding Applications.**
- ▲ **End-Stamped 'ER70S-4' for Instant I.D.**

Classifications:

AS 1167.2: R4.
AWS/ASME-SFA A5.18: ER70S-4.

Description and Applications:

Comweld LW1 is a copper coated, double de-oxidised 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.

Comweld LW1 is recommended for the TIG welding of steel pipes, plates and castings with a tensile strength in the 500 MPa class. It is tolerant to surface rust and mill scale and is ideal for root pass welding applications where tough and ductile welds are produced.

When using Comweld LW1 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 LW1 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 Thoriated or 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.

JOINING PROCESS:

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

TYPICAL ALL WELD METAL MECHANICAL PROPERTIES:

Yield Stress	400 MPa.
Tensile Strength	500 MPa.
Elongation	29%
CVN Impact Values	100 J av @ -20°C

TYPICAL ROD ANALYSIS:

C: 0.08%	Mn: 1.16%	Si: 0.75%
S: 0.010%	P: 0.015%	Fe: Balance

COMPARABLE CIGWELD PRODUCTS:

Autocraft LW1 GMAW wire
AWS A5.18: ER70S-4

Packaging Data:

Rod Size (mm)	Pack Weight/Type	Approximate Rods/kg	Part No
1.6 x 915	5kg Pack	84	321411
2.4 x 915	5kg Pack	34	321412