



TIG 1185 / 45708W

Copper based alloy for TIG welding Copper-Aluminium alloys,
Copper –Nickel alloys & Cast Iron.

Description:

Mini-flux filler rod for overlays, repairs and fabrication of parts made from copper and its alloys such as York-Albro, cupro-aluminium, and the joining of these to nickel alloys, or cast iron which must have high corrosion resistance.

45708W is recommended particularly for its excellent resistance to corrosion from sea water and mineral and organic acids, such as sulphuric, acetic, hydrofluoric and hydrochloric acid diluted to 5%, saline and alkaline solutions.

45708W gives protection against corrosive liquids, sulphates and other bleaching agents used in paper and sugar manufacturing. It also provides good corrosion resistance to sodium, potassium, barium and aluminium chlorides.

The presence of Mini-flux round the rod makes it possible to eliminate oxide formation during welding; it facilitates bonding with the base metal by increasing the weld-ability of the alloy.

Major Features:

- Excellent resistance to sea water corrosion exceptional welding characteristics.
- Resistant to cavitation and erosion.
- Resistant to elevated temperature oxidation, up to 400°C.
- Machinable deposit.

Technical data:

Mechanical properties:

Tensile Strength (N/mm ²):	500-600
Elongation (l=5d)(%):	~25
Yield stress (N/mm ²):	250-300
Hardness (HB ₃₀):	~130

Shielding Gas:

Argon of at least 99.95 % purity.

Applications:

- Piping ducting
- Ducts
- Condensers
- Heat exchangers
- Circulation pumps
- Drill pipes
- Pumps
- Valves
- Connectors etc.

Procedure for use:

Preparation:

Ensure that the surfaces are clean and remove the oxides. In cases where the opposite side to the welding cannot be protected by an inert gas, apply Albro-flux on this surface.

Preheat:

Not usually necessary; except when welding is carried out on large parts made of copper-based material, when it is advisable to preheat the part to approximately 200°C.

Precautions:

Ensure that the pipes are not under stress before welding. If welding is interrupted, the joint must be cleaned again and the oxides removed before continuing.

Welding:

Current: = (-)

Angle between torch and work-piece for a flat joint: 70 - 80°. Angle between rod and work-piece: 15 - 30°.

TIG welding with D.C. using 45708W is facilitated by the presence of a highly resistant flux, so that a very pure deposit can be obtained. D.C. welding produces high quality deposits, as the arc is more stable.

Welding positions:

F, HF, H, VU, O, OF.
PA, PB, PC, PF, PE, PD,
according to ISO 6947.

Recommended welding current:

Ø Electrode (mm)	Direct current (DC) Thoriated Tungsten
1.0	15-80
1.6	70-150
2.4	110-180
3.2	150-200
4.0	180-250

Machining:

45708W deposits can be machined with normal cutting tools and can be cut using plasma cutting processes.

Rod diameter: 2.4 mm.

DIGITALWELD

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