

PRODUCT DATA SHEET

Afrox Cuprofil Afrox TIG Cu

Afrox Cuprofil and Afrox TIG Cu are deoxidized copper filler wires for the welding of pure copper where maximum thermal and electrical conductivity are required. Afrox Cuprofil should be shielded with pure argon, pure helium or an argon/helium mixture (Coppashield®) for thicker sections. Flow rates of 10-18 l/min should be used. Afrox TIG Cu should be shielded with pure argon but pure helium provides deeper penetration, higher travel speeds and allows preheat to be reduced.

Applications include plate for chemical plant and moulds, stills and calorifiers, rods and wires for electrical components and tubes for heat exchangers.

Applications

Materials to be Welded

Oxygen-free copper

BS grade	C 103, UNS C10200, ISO Cu-OF/Cu-OFS
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Classifications

AWS	A5.7	ERCu
DIN	1733	SG-CuSn (2.1006)
BS	2901Pt3	C7
EN	24373	Cu1898 (CuSn1)

Chemical Analysis (All weld metal)

% Copper	98,0	% Lead	0,01 max
% Aluminium	0,01 max	% Iron	0,03 max
% Silicon	0,1 - 0,5	% Phosphorous	0,015 max
% Manganese	0,1 - 0,5	% Arsenic	0,03 max
% Nickel	0,05 max	% Others Total	0,10 max
% Tin	0,5 - 1,0		

Typical Mechanical Properties (All weld metal in the as welded condition)

Tensile Strength	210 - 245 MPa
Hardness	60 - 80 HB

Typical Physical Properties

Melting Range	1 020 - 1 050
Density kg/dm ³	8,9
Electrical Conductivity at 20°C sm/mm ²	15 - 20
Thermal Conductivity at 20°C W/(m/K)	120 - 145

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Packing Data

MIG			TIG			
Diameter (mm)	Pack Mass (kg)	Item Number	Diameter (mm)	Pack Mass (kg)	Consumable Length (mm)	Item Number
1,0	15,0	W077730	1,6	5,0	1 000	W077574
1,2	15,0	W033130	2,4	5,0	1 000	W077576
1,6	15,0	W033131	-	-	-	-

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