

PRODUCT DATA SHEET

Afrox Filmax Tin Bronze Afrox TIG Tin Bronze

Afrox Filmax Tin Bronze and Afrox TIG Tin Bronze are 7% tin, bronze filler wires for welding a range of copper base alloys to themselves and to CMn steels or cast irons, and also for the repair and joining of castings. It is also suitable, if low dilution is achieved, for surfacing to give a bearing surface and/or corrosion resistant overlay on steel components, shafts, etc. Stainless steels should be avoided because chromium pick-up causes embrittlement. Afrox Filmax Tin Bronze 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 Tin Bronze should be shielded with pure argon but pure helium provides deeper

penetration, higher travel speeds and allows preheat to be reduced.

Applications

Used to weld base metals of steels and cast iron to copper, brass, and bronze. Ideal for overlays on shafts, propellers, housings, couplings, bushings, valve seats, pumps, and other surfaces needing a bronze wearing surface.

Materials to be Welded

Tin bronze	Up to 10% Sn + 5% P. BS PB101 - I03, UNS C50100-C52400
Gunmetals	BS LG3, LG4, LBPI (but >5% Pb leaded types difficult)
Bell metal	Copper + 20 - 25% tin
Brass	Copper + 40% zinc, manganese bronze

Classifications

AWS	A5.7	ERCuSn-A (nearest equivalent)
DIN	1733	SG-CuSn6 (2,1022)
BS	2901Pt3	C11
EN	24373	CuSi80A CuSn6P

Chemical Analysis (All weld metal)

% Copper	Bal.	% Tin	5,5 - 8,0
% Aluminium	0,01 max	% Iron	0,10 max
% Zinc	0,01 max	% Others Total	0,40 max
% Phosphorous	0,10 - 0,35		

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

Tensile Strength	320 - 360 MPa
Hardness	80 - 90 HB
% Elongation on 5d	25 max
Hardness After Work Hardening	130 HB

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	W077606	1,6	5,0	1 000	W077600
1,2	15,0	W077607	2,0	5,0	1 000	W077601
1,6	15,0	W077608	2,4	5,0	1 000	W077602

The information contained or otherwise referenced herein is presented only as typical without guarantee or warranty, and Afrox expressly disclaims any liability incurred from any reliance therein. No data is to be construed as recommended for any welding condition or technique not controlled by Afrox.

For more information contact the Afrox Customer Service Centre Tel: 0860 02 02 02
E-mail: customer.service@afrox.linde.com Website: www.afrox.com

