

PRODUCT DATA SHEET

Afrox Filmax Silicon Bronze R Afrox TIG Silicon Bronze

Afrox Filmax Silicon Bronze R and Afrox TIG Silicon Bronze are pure copper filler wires deoxidized with 3% silicon for welding a wider range of copper alloys than Afrox Cuprofil and Afrox TIG Cu including overlaying of steels and cast irons. The Afrox Filmax Silicon Bronze R wire is optimised for laser brazing. Afrox Filmax Silicon Bronze R 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 Silicon Bronze 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. Also excellent for MIG brazing and laser brazing onto galvanized steel for automotive body panels.

Materials to be Welded

General purpose including phosphorus deoxidized copper, silicon bronze, nickel silver and some brasses.

Applications

Classifications

AWS	A5.7	ERCuSi-A
DIN	1733	SG-CuSi3 (2,1461)
BS	2901Pt3	C9
EN	24373	CU6560 CuSi3MnI

Chemical Analysis (All weld metal)

% Copper	Bal.	% Tin	0,2 max
% Aluminium	0,01 max	% Iron	0,3 max
% Zinc	0,02 max	% Silicon	2,8 - 4,0*
% Manganese	0,75 - 1,5	% Lead	0,02 max
% Phosphorous	0,02 max	% Others Total	0,4 max

* For the Afrox Filmax Silicon Bronze R the % silicon is 2,8% - 3,1%

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

Tensile Strength	330 - 370 MPa
% Elongation on 5d	40 max
Hardness	80 - 90 HB

Packing Data

MIG			TIG			
Diameter (mm)	Pack Mass (kg)	Item Number	Diameter (mm)	Pack Mass (kg)	Consumable Length (mm)	Item Number
0,8	15,0	W077614	1,6	5,0	1 000	W077610
1,0	15,0	W033122	2,4	5,0	1 000	W077611
1,2	15,0	W077616	3,2	5,0	1 000	W077612
1,6	15,0	W033126	-	-	-	-

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