

PRODUCT DATA SHEET

Afrox Afrolux



Afrolux is a heavily coated rutile iron powder electrode for high speed welding of H-V fillets and flat butt joints. Using the touch or free arc techniques, the electrode deposits a very neat, finely rippled weld from which the slag is easily removed. The arc is smooth and stable with very little spatter. Striking and restriking qualities are excellent. Afrolux has a weld metal recovery of approximately 160%.

Applications

Afrolux is eminently suitable for welding fillet and butt welds in mild steel for general fabrication work.

Technique

The best results are obtained using the touch welding technique with the electrode held at a sufficient angle to prevent the molten slag from crowding the arc. AC is recommended as it reduces arc blow, particularly at the high currents required with large diameter electrodes.

Re-drying Procedure

Normally re-drying of Afrolux is not necessary, however the molten slag of damp electrodes will tend to crowd the arc even when the correct technique is used. Damp electrodes should be re-dried at 100-120°C for 1-2 hours.

Classifications

AWS	A5.1	E7024-1
SABS	455	E5124/-2345
EN	2560	E 38 O RR 73

Approvals

Lloyds Register of Shipping Grade D,BF,2m,2Ym,No

American Bureau of Shipping Grade 2

Germanischer Lloyd Grade 2

South African Bureau of Standards

Typical Chemical Analysis (All weld metal)

% Carbon	0,04 - 0,12	% Sulphur	0,025 max
% Manganese	0,6 - 1,2	% Phosphorous	0,025 max
% Silicon	0,2 - 0,6		

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

Yield Strength	420 MPa min
Tensile Strength	510 - 560 MPa
% Elongation on 50 mm	22 min
Charpy V-Notch at +20°C	80 J min
Charpy V-Notch at 0°C	60 J min
Charpy V-Notch at -18°C	40 J min

Typical Current Values (AC 50 OCV min or DC+/-)

Diameter (mm)	Current (A)
2,5	70 - 115
3,15	120 - 155
4,0	160 - 225
5,0	220 - 335
6,3	280 - 390

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Deposition Data

Note:

- 1) The deposition data given was established at the optimum current rating which would be approximately in the middle of the specified range.
- 2) The mass of weld metal deposited per arc hour is a theoretical value which does not take into account welder efficiency.

Diameter (mm)	Mass of an Electrode (g)	Burn-off Time (sec)	Mass of Metal Deposited per Electrode (g)	Mass of Weld Metal Deposited per Arc Hour (g)	No. Electrodes per kg of Weld Metal	kg Weld Metal per kg of Electrodes
2,5	30,3	63,2	32,7	1 139	48	0,61
3,15	66,9	77,0	54,1	1 944	25	0,61
4,0	102,4	84,9	108,4	2 755	16	0,62
5,0	157,7	91,0	164,3	3 694	8	0,63
6,3	248,0	125,5	250,9	4 735	7	0,66

Data for Welding Horizontal Fillet Welds

Diameter (mm)	Throat Thickness (mm)	Current (A)	Arc Time (sec)	Bead Length per Electrode (mm)	Welding Speed (m/h)
2,5	2,9	90	64,8	240	13,3
3,15	3,1	135	88,2	360	14,7
4,0	3,8	200	93,6	432	16,6
5,0	4,1	275	102,0	528	18,6
6,3	5,0	350	132,0	590	16,1

Packing Data

Diameter (mm)	Electrode Length (mm)	Approx. No. Electrodes/kg	Pack Mass (kg)	Item Number (multi-kg pack)
2,5	350	30,0	3 x 4,0	W075202
3,15	450	16,0	3 x 5,0	W075203
4,0	450	11,0	3 x 5,0	W075204
5,0	450	7,0	3 x 5,0	W075205
6,3	450	4,0	3 x 5,0	W075207

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