



**AFROX METALLOY 76**

Metalloy 76 is a gas shielded metal cored wire designed for semi-automatic, automatic and robotic welding of low and medium carbon steels. The wire is recommended for single and limited multi-pass welding in the flat and horizontal positions. The recommended shielding gas is Afrox Fluxshield (75% Ar/ 25% CO<sub>2</sub>) at a gas flow rate of 17-24 l/min. Metalloy 76 produces high quality welds with virtually no residual slag. The product features lower spatter and higher strength levels. The

higher manganese content gives increased deoxidation and greater tolerance to mill scale and paint primers on the workpiece. Penetration is superior to that of solid wires, thereby minimising the cold lap problem on heavier sections of steels. Low spatter and low slag volume combine to greatly reduce clean-up costs.

**CLASSIFICATIONS**

AWS	A5.18	E70C-6M H4
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**APPROVALS**

Lloyds Register of Shipping	3S, 3Y40S-H15	Bureau Vertias	SA 3YM
American Bureau of Shipping	3SA, 3YSA	Germanischer Lloyd	3Y40H5S
Det Norske Veritas	111 Y40MS	Canadian Welding Bureau	E4801C-6-CH

**TYPICAL WELD METAL COMPOSITION WITH AFROX FLUXSHIELD**

% Carbon	0.05
% Manganese	1.58
% Silicon	0.71
% Sulphur	0.013
% Phosphorous	0.012

**TYPICAL MECHANICAL PROPERTIES (ALL WELD METAL IN THE AS WELDED CONDITION) FLUXSHIELD**

Yield Strength	539 MPa	Charpy V-Notch at -18°C	98J
Tensile Strength	612 MPa	Charpy V-Notch at -29°C	72J
% Elongation on 50mm	27	Charpy V-Notch at -40°C	46J

**WELDING DATA**

(DC+)

Diameter (mm)	Position	Current Amps	Voltage Volts	Optimum Settings		Deposition Rates (Kg/h)	Electrode Stickout (mm)
				Current Amps	Voltage Volts		
1.2	Flat/Horizontal	200-350	26-34	300	31	2.7-7.5	12-19
1.6	Flat/Horizontal	275-450	30-36	350	31	3.5-8.3	19-25

**PACKING DATA**

Diameter (mm)	Item Number	Spool Mass (Kg)
1.2	081-029	15
1.6	081-028	15

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