

PRODUCT DATA SHEET

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 Afox Fluxshield® (75% Ar/25% CO₂) 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 deoxidization 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 |
| EN | 17632-A | T 50 Z M M 2 H5 |

Approvals

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|---|
| Lloyds Register of Shipping 3S,3440SH15 |
| American Bureau of Shipping 3SA, 3YSM |
| Det Norske Veritas I I I Y40MS |
| Bureau Veritas SA 3YM |
| Germanischer Lloyd 3Y40H5S |
| Canadian Welding Bureau E4801C-6-CH |

Typical Chemical Analysis (All weld metal)

| | | | |
|-------------|------|---------------|-------|
| % Carbon | 0,06 | % Sulphur | 0,019 |
| % Manganese | 1,64 | % Phosphorous | 0,012 |
| % Silicon | 0,75 | | |

Typical Mechanical Properties (All weld metal using CO₂ gas)

| | |
|-------------------------|---------|
| Yield Strength | 559 MPa |
| Tensile Strength | 628 MPa |
| % Elongation on 50 mm | 27 |
| Charpy V-Notch at -18°C | 72 J |

Welding Data (DC+)

| Diameter (mm) | Position | Current | | Optimum Settings | | Deposition Rates (kg/h) | Electrode Stick Out (mm) |
|---------------|-----------------|-----------|-----------|------------------|-----------|-------------------------|--------------------------|
| | | Amps (A) | Volts (V) | Amps (A) | Volts (V) | | |
| 1,2 | Flat/horizontal | 200 - 350 | 27 - 35 | 300 | 32 | 2,7 - 7,0 | 12,0 - 19,0 |
| 1,6 | Flat/horizontal | 300 - 450 | 29 - 34 | 400 | 32 | 5,0 - 9,5 | 25,0 - 30,0 |

Packing Data

| Diameter (mm) | Spool Mass (kg) | Item Number |
|---------------|-----------------|-------------|
| 1,2 | 15,0 | W081029 |
| 1,6 | 15,0 | W081028 |

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