

# PRODUCT DATA SHEET

## Afrox Filmax FN55



Afrox Filmax FN55 solid MIG welding wire is designed to deposit Fe-55% Ni weld metal for the repair and joining of cast iron. The NiFe alloy is suitable for welding all grades of cast iron but particularly for spheroidal graphite (SG), nodular or ductile irons and some alloy cast irons. It provides compatible strength, ductility and toughness, coupled with good machinability. The NiFe consumables can also be used on some of the high alloy austenitic irons (Ni-Resist). The flake graphite grades are welded with a preheat of 300-350°C but the SG grades are best buttered using low heat input, and low temperature techniques to avoid HAZ hot cracking. Note the martensitic Ni-Hard cast irons and white irons are generally considered to be unweldable because they are too crack-sensitive. The NiFe consumables are also suitable for welding transition joints between cast iron and cast steels, and cast iron and mild/low alloy steels.

### Applications

Typical components are machine bases, pump bodies, engine blocks, gears and transmission housings.

### Materials to be Welded

ASTM/UNS BS

A602,A47,A338,A220 2789 – SG irons

668I – Ductile irons

### Classifications

DIN	17745	2.4472
BS	2901Pt5	NA47

### Typical Chemical Analysis (All weld metal)

% Carbon	0,15 max	% Nickel	52,0 - 60,0
% Manganese	1,0 max	% Iron	Bal.
% Silicon	0,5 max	% Copper	0,5 max
% Sulphur	0,02 max	% Cobalt	2,0 max
% Phosphorous	0,03 max		

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

0,2% Proof Stress	230 MPa
Tensile Strength	400 MPa
% Elongation on 4d	24
Hardness cap/mid	150 HV

### Packing Data (DC+ AC 70 OCV min)

Diameter (mm)	Pack Mass (kg)	Item Number
1,0	15,0	W077695
1,2	15,0	W077696

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