

## 410NiMo

### Comparable specifications

ASME SFA A 5.9: ER410NiMo  
EN ISO 14343-A: 13 4  
Werkstoff Nr.: 1.4313

### Description and applications\*

\* Illustrative, not-exhaustive list

Low carbon martensitic stainless steel filler wire primarily used to weld cast and wrought material of similar chemical composition. ER410NiMo classification is modified to contain less chromium and more nickel to avoid ferrite in the microstructure (as it has a deleterious effect on mechanical properties); due to its low carbon content, this filler metal has even better weldability than ER410.

Characterized by high resistance to cavitation, erosion and corrosion, as well as by high toughness at low temperatures.

Preheat and inter-pass temperatures of not less than 150°C are recommended during welding. Final post-weld heat treatment should not exceed 620°C, as higher temperatures may result in rehardening.

Typical applications:

- welding, repairing and overlaying of type 410 and 410NiMo castings and wrought materials;
- general welding applications in the manufacturing of turbines, valve bodies, valve seating surfaces, gears, propeller shafts, high pressure piping;
- usages in the offshore, power generation, hydropower industry.

### Weldable base materials\*

\* Illustrative, not-exhaustive list

ASTM CA6NM castings or similar material, as well as light-gauge 410, 410S and 405 base metals.

### All-weld metal mech. properties\*

\* For reference only values

Tensile strength (Rm):  $\geq 750 \text{ N/mm}^2$     Yield Strength (Rp<sub>0.2</sub>):  $\geq 500 \text{ N/mm}^2$   
Elongation:  $\geq 15\%$

### Chemical composition\*

\* For reference only values

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
max	max	max	max	max	4.00	11.00	0.40	max
0.05	0.60	0.50	0.020	0.030	5.00	12.50	0.70	0.50

### Standard packaging data\*

Welding process	Product type	Ø mm (inches)	Packing type	Weight kg (lbs)	Length mm (inches)
GMAW **	filler wire	0.80 - 1.20 (0.030 - 0.047)	spools BS300 / D300	15 (33)	n.a.
GTAW **	filler rod	1.60 - 4.00 (1/16 - 5/32)	cardboard boxes / tubes	5 (11)	1000 (39.4)
SAW **	filler wire	1.60 - 4.00 (1/16 - 5/32)	basket rims B450	25 (55)	n.a.

\* Other sizes and packing types are available upon request

\*\* GMAW: gas metal arc welding; GTAW: gas tungsten arc welding; SAW: submerged arc welding

### Marking

Each filler rod for GTAW welding is durably marked with an identification traceable to the unique product type. Welding filler materials wound on spools or in coils are durably marked on the coil or spool with an identification traceable to the unique product type.

The outside of each unit package is suitably labelled with at minimum the following data: grade, diameter, heat, lot no., classifications.

Customized labels are available upon request.

### Lot classification

All our productions fulfil the **Class S3** requirements acc. to EN ISO 14344.