

# 410

## Comparable specifications

ASME SFA A 5.9: ER410  
EN ISO 14343-A: 13  
Werkstoff Nr.: ~1.4009

## Description and applications\*

\* Illustrative, not-exhaustive list

Stainless steel filler metal designed to weld stainless steels of similar composition. It is also used for deposition of overlays on carbon steels to resist corrosion, erosion, or abrasion.

This filler material contains sufficient carbon to enable air hardening transformation of the weld metal to a predominately martensitic microstructure, so it is an air-hardening type: preheat and postweld heat treatments are required to achieve welds of adequate ductility for many engineering purposes.

This grade may be used for:

- welding or repairing 12% Cr air-hardenable stainless steels like types 410, 416, 420, 431 and cast C-15;
- overlay of carbon and low-alloy steels for resistance to corrosion, erosion, or abrasion;
- surfacing of steel mill rolls;
- applications in furnace, burner and turbine parts' production.

## Weldable base materials\*

\* Illustrative, not-exhaustive list

Wrought or cast martensitic, types 403, 405, 410, and 416 stainless steel.

## All-weld metal mech. properties\*

\* For reference only values

Tensile strength (Rm):  $\geq 450 \text{ N/mm}^2$     Yield Strength (Rp<sub>0.2</sub>):  $\geq 250 \text{ N/mm}^2$   
Elongation:  $\geq 15\%$

## Chemical composition\*

\* For reference only values

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
max	max	max	max	max	max	12.00	max	max
0.12	0.60	0.50	0.020	0.030	0.50	13.50	0.50	0.75

## 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.