

718

Comparable specifications

ASME SFA A 5.14: ERNiFeCr-2 (UNS N07718)

EN ISO 18274: Ni 7718 - NiCr19Fe19Nb5Mo3

Werkstoff Nr.: 2.4667

AMS: 5662, 5663, 5832, 5962

Description and applications*

* *Illustrative, not-exhaustive list*

Age hardenable nickel-chromium alloy that combines high corrosion resistance and high mechanical properties with good behaviour during forming.

This filler metal shows outstanding resistance to a wide range of highly corrosive media and high creep-rupture at temperatures ranging from -250°C to 700°C.

The weld metal will age harden on heat treatment, then being characterized by high strength and outstanding resistance to postweld cracking due to Ti, Al and Nb addition.

Used in a wide range of applications, such as:

- welding of nickel base alloys such as 718, 750 or 706 grades by every automatic welding methods (GMAW, GTAW, etc.);
- components for liquid fuelled rockets;
- rings, casings, and various formed metal parts for gas turbine engines;
- cryogenic tanks;
- applications in petrochemical, automotive, aircraft industries.

Weldable base materials*

* *Illustrative, not-exhaustive list*

Nickel-chromium-niobium-molybdenum alloys, UNS N07718, nickel alloys 718, 750, 706.

All-weld metal mech. properties*

* *For reference only values*

Tensile strength (Rm): $\geq 1140 \text{ N/mm}^2$

(age-hardened condition: heat treated at 718°C for 8 hours, then furnace cooled at 56°C per hour to 620°C and held for 8 hours, then air cooled)

Chemical composition*

* *For reference only values*

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	Fe	Ti	Al	Nb+Ta	B
max	max	max	max	max	50.00	17.00	2.80	max	max	0.70	0.20	4.80	max
0.08	0.30	0.30	0.015	0.015	55.00	21.00	3.30	0.30	24.00	1.10	0.80	5.50	0.006

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)

* *Other sizes and packing types are available upon request*

** *GMAW: gas metal arc welding; GTAW: gas tungsten 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.