

Bar

Corrosion application



It is a precipitation-hardenable Ni-Cr alloy with a significant amount of Fe, Nb and Mo and containing lesser amounts of Al and Ti. This alloy combines excellent high strength up to 700°C with good corrosion resistance and excellent weldability. Exceptional creep-rupture strength at high temperature. It is amagnetic.

1. Chemical content

UNS N07718		EN NiCr19FeNb		W 2.4668	
Ni	Cr	Mo	Nb	others	Fe
50 - 55	17 - 21	2,8 - 3,3	4,75 - 5,5	Ti, Al	Bal.

2. Corrosion resistance

Stress-Corrosion cracking resistance according to NACE **MR0175** is guaranteed.

3. Heat-treatment

In standard our heat treatment is : 941°C to 1010°C + WQ followed by age treatment if required.

4. Applications

- Chemical industries
- Safety parts
- Power plant (gas turbine, ...)
- Oil and gas, petrochemistry
- Aeronautic,...

Standards related to these applications :
ASTM B637, NACE MR0175, AMS 5662

5. Shapes – Tolerances – Destinations

Round bars

Section	Ø 4 to Ø 20mm	Ø 20 to Ø 115mm	Ø 100 to Ø 250mm
Process	Cold bars	Hot-rolled bars	Forged bars
Surface Conditions	Raw, rectified, chamfrened	Peeled , rectified, polished, roller burnished, raw	Peeled , ground, rectified, polished, raw
Length	3 to 6m	3 to 6m	
Weight	min 400Kg	min 1000Kg	
Packaging	Wooden box or narrow strapping	Wooden box or narrow strapping	Secured package
Tolerances	drawn straightened and rectified h9, Ra < 1,2µm	Peeled, roller burnished h11, Ra < 3,2µm	
	Ground	+/- 3mm	+/- 3mm
	Peeled (Ra < 6,3µm)	-0/+ 0,8mm for diameter < 80mm -0/+1,2mm for diameter > 81mm	- 0 / +3mm
Straightness	< 1mm/m	< 4,2mm/m	< 4,2mm/m
Uses	Bars for machining	Bars for machining or hot-transformation	
Customer processes used in manufacturing finished parts	Machining, free-cutting	Machining, forging, stamping, hot-rolling, drop forging, ring beking, drawing, upsetting, ring rolling,...	

5. Shapes – Tolerances – Destinations

Square bars	
Section	80x80mm to 250x250mm
Process	<u>Bloomed or forged</u>
Surface Conditions	ground
Length	3 to 6m
Weight	min 1000Kg
Tolerances	+/- 5mm
Straightness	10mm/m
Uses	Bars for hot-transformation only
Customer processes used in manufacturing finished parts	Forging, stamping, drop forging, ring becking, upsetting, drawing, ring rolling

Other shapes : Please consult us

6. Certificate

Certificate 10204-3.1

Chemical composition according to relevant standards.

Bars for hot-transformation :

Ultrasonic test according to the norm EN10308

Bars for other applications :

Condition and tests according to specified standard

The data enclosed in this document are only given as indicative values and correspond to our standard product. Different specific requirement are subject to discussion and formal approval by Aperam Alloys Imphy. For further information or special request, please contact us.