

## Bar

### Corrosion application



This is an alloy similar to NY600 but aged hardening. It combines a high tensile strength up to 600°C with good creep-rupture properties up to 820°C. It has a good corrosion resistance in wide oxidizing and reducing environment. It presents also a good corrosion resistance at high and low temperatures and high resistance to stress corrosion cracking.

#### 1. Chemical content

UNS N07750 EN NiCr17Fe7TiAl Wr 2.4669					
Ni	Cr	Fe	Nb	Ti	Al
base	14-17	5-9	0,7-1,2	2,25-2,75	0,2-0,8

#### 2. Heat-treatments

Our standard is :  
 Solution : 1150°C, 2 to 4 hrs, air cooling + stabilize : 845°C,  
 24hrs, air cooling + precipitation 700°C, 20hrs, air cooling

Other treatments are possible. Please consult us.

#### 3. Applications

- Elements for gas turbines (wheels, blades, boltings, pressure vessels,...)
- Nuclear industry (spring, bolting,...)
- Aeronautic (elements for aircraft structure,...)
- Valves,....

Standards related to these applications :

**ASTM B637,**  
**AMS 5667, 5668, 5669, 5670, 5671, 5747 and 5749**

#### 4. Shapes – Tolerances – Destinations

##### Round bars

Section	Ø 4 to Ø 20mm	Ø 20 to Ø 115mm	Ø 100 to Ø 400mm
Process	Cold bars	Hot-rolled bars	Forged bars
Surface Conditions	Raw, rectified, chamfrenced	<b>Peeled</b> , rectified, polished, roller burnished, raw	<b>Peeled</b> , 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
<b><u>Tolerances</u></b>	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,...	

#### 4. Shapes – Tolerances – Destinations

<b>Square bars</b>	
<b>Section</b>	<b>80x80mm to 265x265mm</b>
Process	<b><u>Bloomed (up to 120x120mm) or forged</u></b>
Surface Conditions	ground
Length	3 to 6m
Weight	min 1000Kg
Tolerances	+/- 3mm
Straightness	10mm/m
<b>Uses</b>	<b>Bars for hot-transformation only</b>
<b>Customer processes used in manufacturing finished parts</b>	Forging, stamping, drop forging, ring becking, upsetting, drawing, ring rolling

#### 5. 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.