

## Bar

### Corrosion application



An alloy Fe, Ni, Cr, Mo and Ti that is precipitation hardenable for high mechanical properties (notably for creep resistance). It presents a good strength and oxidation resistance at elevated temperature up to 700°C. It is a non-magnetic alloy.

#### 1. Chemical content

**UNS S66286 X6NiCrTiMoVB25-15-2** Wr 1.4944 or 1.4980

Fe	Ni	Cr	Ti	Mo	Others
base	24 - 27	13,5 - 16	1,9 - 2,35	1 - 1,5	Mn, V

#### 2. Corrosion resistance

- PREN > 30
- Stress-corrosion cracking resistance according to NACE MR0175 is guaranteed

#### 4. Shapes – Tolerances – Destinations

##### Round bars

Section	Ø 4 to Ø 20mm	Ø 20 to Ø 140mm	Ø 140 to Ø 300mm
Process	Cold bars	Hot-rolled bars	Forged bars
Surface Conditions	Raw, rectified, chamfrened	<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>Tolerances</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
<b>Uses</b>	Bars for machining	Bars for machining or hot-transformation	
<b>Customer processes used in manufacturing finished parts</b>	Machining, free-cutting	Forging, hot-rolling, machining, stamping, drop forging, ring rolling, ring becking, drawing, upsetting,...	

#### 3. Applications

- Energy (Turbine components, ...)
- Oil and gas industries
- Aeronautic (compressors parts, bolts, ...)

Standards related to these applications :

**ASTM A638, A453**

**AMS 5726, 5731, 5732, 5734, 5737, 5895**

#### 4. Shapes – Tolerances – Destinations

<b>Square bars</b>	
<b>Section</b>	<b>80x80mm to 265x265mm</b>
Process	<b>Bloomed</b> (up to 120x120mm) or forged
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

Others shapes (pickled plates or sheets, ...) : Please consult us.

#### 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.