

Bar

Magnetic application



Fe-Co soft magnetic alloys with exceptional properties include: a very high saturation induction, a high resistivity, low loss and low coercitive field.

1. Chemical content

UNS R30005

Fe	Co	V
Bal.	46 - 50	1,5 - 2

2. Thermal expansion controlled

$9.5 \cdot 10^{-6} / ^\circ\text{C}$

3. Applications

- Motor parts with a good power/weight ratio (rotor and stator for on-board electrical system)
- Poles for electromagnets
- Magnetostrictive sensors

Standards relative to these applications :
ASTM A801

4. Shapes – Tolerances – Destinations

Round bars

Section	Ø 20 to Ø 48mm	Ø 50 to Ø 500mm
Process	Hot-rolled bars	Forged bars
Surface Conditions	Peeled , rectified, polished, roller burnished, raw	Peeled , ground, rectified, polished, raw
Length	3 to 6m	Maxi 500mm
Weight	no min	
Packaging	Wooden box or narrow strapping	Secured package
Tolerances	Peeled + roller burnished h12 Ø 20 to 29 or +0/-0,25 Ø > 30mm, Ra < 3,2µm	
	Ground	+/- 3mm
	Peeled (Ra < 6,3µm)	- 0 / +3mm
	Straightness	< 4,2mm/m
Uses	Bars for machining or hot-transformation	
Customer processes used in manufacturing finished parts	Machining, forging, stamping, hot-rolling, drop forging, ring beking, drawing, upsetting, ring rolling,...	

4. Shapes – Tolerances – Destinations

Square bars	
Section	80x80mm to 185x185mm
Process	Bloomed (up to 185x185) or forged
Surface Conditions	Ground
Length	3 to 6m
Weight	no min
Tolerances	+/- 3mm
Straightness	10mm/m
Uses	Bars for hot-transformation only
Customer processes used in manufacturing finished parts	Forging, stamping, drop forging, ring becking, ring rolling,...

Others shapes : Please consult us.

5. Certificate

Certificate 10204-3.1
Chemical composition according to relevant standards.

Bars for hot-transformation :
Ultrasonic test according to standard EN10308

Bars for others 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.