

Bar

Corrosion application



This is a Fe, Ni, Cr, Mo alloy developed to resist in severe corrosive environments, such as sea water, oil related industries and solutions of sulfuric acid or phosphoric acid. It is a non-magnetic alloy.

1. Chemical content

| UNS N08825 | EN NiCr21Mo | W 2.4858 | | |
|------------|-------------|----------|---------|--------|
| Fe | Ni | Cr | Mo | Others |
| base | 38-46 | 20-23 | 2,5-3,5 | Ti, Cu |

2. Corrosion resistance

- **PREN > 30** as a standard, **PREN > 32** if asked
- 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 325mm |
|---|--|---|--|
| Process | Cold bars | Hot-rolled bars | Forged bars |
| Surface Conditions | Raw, rectified, chamfered | Peeled , rectified, polished, roller burnished, raw | Peeled , ground, rectified, polished, raw |
| Length | 3 to 4m | 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 becking, drawing, upsetting, ring rolling,... | |

3. Applications

- Chemicals Industries (Sulfuric acid, phosphoric acid)
- Pollution control (scrubbers, ventilation,...)
- Pickling
- Oil and Petrochemistry
- Marine Industries

Standards related to these applications :
ASTM B425 or B564
NACE MR0175

4. Shapes – Tolerances – Destinations

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