

HM Wire International, Inc.

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REQUEST
A
QUOTATION

Alloy 625 - Inconel 625 Nickel Alloy

Description: Alloy 625 offers: •Excellent corrosion resistance•Resistant to chloride stress corrosion•Resistant to sulphide stress cracking•High fatigue strength in seawater•Excellent weldability•Low magnetic permeability

Applications: Wellhead components, Sheathing, Fasteners, Clamps, Downhole equipment for corrosive/sour service., Propellers and Shafts, Propulsion Motors, Wire Rope, Fasteners.

| | | | | | | | |
|---------------------------------|-----------|----------|-----------|-----------|-----------|-----------|-------------|
| Nominal Composition: | Al | C | Co | Fe | Mo | Mn | Nb |
| | 0.40 | 0.10 | 20 - 23 | 5.0 | 8 - 10 | 0.50 | 3.15 - 4.15 |
| | Ni | P | S | Si | Ti | | |
| | 58.0 | 0.015 | 0.015 | 0.50 | 0.4 | | |

Mechanical Properties

Annealed Condition

Bar - Rulling Sections up to and including 101.6mm (4")

| | | |
|--|-----------------------|---------|
| 0.2% Proof Stress minimum | 415 N/mm ² | 60 ksi |
| Ultimate Tensile Strength minimum | 830 N/mm ² | 120 ksi |
| Elongation minimum | 30% | |

Bar - Rulling Sections greater than 101.6mm (4")

| | | |
|--|-----------------------|---------|
| 0.2% Proof Stress minimum | 345 N/mm ² | 50 ksi |
| Ultimate Tensile Strength minimum | 760 N/mm ² | 110 ksi |
| Elongation minimum | 25% | |

Physical Properties

| | |
|---|-------------------------------|
| Density | 84.4 kg.m-1 |
| Magnetic Permeability | <1.001 (20°C) |
| Curie Temperature | -160°C |
| Young's Modulus | 205 x 10 N/mm ² |
| Specific Heat | 410 J.kg-1.°K-1 |
| Specific Electrical Resistance | 1.29 (20°C) (?O.m) |
| Thermal Conductivity | 9.9 (20°C) W.m-1.°K-1 |
| Coefficient of Thermal Expansion | 12.8 x 10 (20 - 100°C) (°K-1) |

*To be used as a guideline only.

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