



HASTELLOY[™] B-3

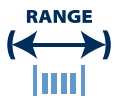
Key Features

- Excellent corrosion resistance to hydrochloric acid at all concentrations and temperatures
- Withstands sulphuric, acetic, formic & phosphoric acids & other non-oxidising media
- Excellent resistance to pitting corrosion & stress corrosion cracking

IMPORTANT

We will manufacture to your required mechanical properties.

key advantages to you, *our customer*



0.025mm to 21mm
(.001" to .827")



Order 3m to 3t
(10 ft to 6000 Lbs)



Delivery:
within 3 weeks



Wire to your spec



E.M.S available



Technical support

HASTELLOY[™] B-3 available in:-

- Round wire
- Bars or lengths
- Flat wire
- Shaped wire
- Rope/Strand

Packaging

- Coils
- Spools
- Bars or lengths



Trade name of Haynes International.

| Chemical Composition | | | Specifications | Key Features | Typical Applications |
|----------------------|-------|-------|---------------------------------------|---|----------------------|
| Element | Min % | Max % | ASTM B335 ASTM B619 | Excellent corrosion resistance to hydrochloric acid at all concentrations and temperatures Withstands sulphuric, acetic, formic and phosphoric acids and other non-oxidising media | Chemical processing |
| Ni | 65.00 | - | | | |
| Cr | 1.00 | 3.00 | Designations | Excellent resistance to pitting corrosion and stress corrosion cracking | |
| Mo | 27.00 | 32.00 | | | |
| Fe | 1.00 | 3.00 | W.Nr. 2.4600 UNS N10675 AWS 051 | | |
| W | - | 3.00 | | | |
| C | - | 0.01 | | | |
| Si | - | 0.10 | | | |
| Co | - | 3.00 | | | |
| Mn | - | 3.00 | | | |
| V | - | 0.20 | | | |
| P | - | 0.030 | | | |
| S | - | 0.010 | | | |
| Ti | - | 0.20 | | | |
| Cu | - | 0.20 | | | |
| Al | - | 0.50 | | | |
| Zr | - | 0.10 | | | |
| Nb/Cb | - | 0.20 | | | |
| Ta | - | 0.20 | | | |
| Ni+Mo | 94.00 | 98.00 | | | |

| | | |
|---------------------------------|----------------------------|---|
| Density | 9.22 g/cm ³ | 0.333 lb/in ³ |
| Melting Point | 1418 °C | 2585 °F |
| Coefficient of Expansion | 10.6 µm/m °C (20 – 100 °C) | 5.7 x 10 ⁻⁶ in/in °F (70 – 212 °F) |
| Modulus of Rigidity | 83 kN/mm ² | 12038 ksi |
| Modulus of Elasticity | 216 kN/mm ² | 31329 ksi |

| Heat Treatment of Finished Parts | | | | | |
|-------------------------------------|----------------|-------------|-----------|-----------|---------|
| Condition as supplied by Alloy Wire | Type | Temperature | | Time (Hr) | Cooling |
| | | °C | °F | | |
| Annealed or Spring Temper | Stress Relieve | 400 – 450 | 750 – 840 | 2 | Air |

| Properties | | | | |
|---------------|--------------------------|-----------|-------------------------------|--------------|
| Condition | Approx. tensile strength | | Approx. operating temperature | |
| | N/mm ² | ksi | °C | °F |
| Annealed | <1200 | <174 | -200 to +400 | -330 to +750 |
| Spring Temper | 1600 – 2000 | 232 – 290 | -200 to +400 | -330 to +750 |

The above tensile strength ranges are typical. If you require different please ask.