

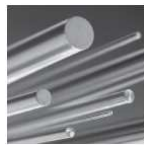
Bezeichnung

| | |
|--|--|
| Material No. / Werkstoff-Nr. | PREMIUM 1.4404 / 1.4401 |
| Description | X2CrNiMo17-12-2 / X5CrNiMo17-12-2 |
| BS | 316L / 316 |
| AISI/SAE | 316L / 316 |
| Search for alternatives in the ABRAMS STEEL GUIDE® | www.steel-guide.co.uk/alternatives/316L |

Specifications



Eco-Präz* [Eco]
L: 500 mm



**Precision round steel
without machining allowance [PRS]**
bright drawn / ground, ISO h9
L: 1,000 mm

Chemical composition BS 316L (reference value %)

| C | Si | Mn | P | S | Cr | Mo | Ni | N |
|----------|---------|---------|----------|--------------|-------------|-----------|-------------|---------|
| 0 – 0.03 | 0 – 1.0 | 0 – 2.0 | 0 – 0.04 | 0.015 – 0.03 | 16.5 – 18.5 | 2.0 – 2.5 | 10.0 – 13.0 | 0 – 0.1 |

Physical properties

| | | | | | |
|--|-------------------------------|------------|------------|------------|------------|
| Hardness (delivery condition) | max. 215 HB, annealed | | | | |
| Tensile strength R_m (as received condition) | Approx. 690 N/mm ² | | | | |
| Working hardness | max. <20 HRC | | | | |
| Thermal expansion coefficient $10^{-6}m/(m \cdot K)$ | 20 - 100°C | 20 - 200°C | 20 - 300°C | 20 - 400°C | 20 - 500°C |
| | 16.0 | 16.5 | 17.0 | 17.5 | 18.0 |
| Thermal conductivity $W/(m \cdot K)$ | 20°C | | | | |
| | 15.0 | | | | |

Technical properties

Stainless, austenitic chromium-nickel-molybdenum steel. Polishable, suitable for low temperatures, high resistance with regards to non-oxidizing acids e.g. nitric acid, sulphuric acid and formic acid, easy to process and good weldability. Can also be used at high temperatures of up to 500°C, non-magnetisable.

Applications

Chemical industry, pharmaceutical industry, food industry, valve and plant construction, building industry, automotive industry, aviation industry, mechanical engineering, offshore, petrochemical industry, electrical equipment, decorative uses and kitchen equipment.

Heat treatment

| Soft annealing | Temperature | Cooling | Hardness |
|----------------|---------------|------------|-------------|
| | 1020 - 1120°C | Air, water | max. 325 HB |



Hardening diagram

