

Hardening Stainless Steel 17- 4PH

Excellent Chemical Resistance, High Hardness

Functional parts and medical Instruments



Available in both high and normal resolution, this is a strong, functional precipitation-hardening steel.

Benefits

- Excellent chemical resistance
- High Hardness
- High density

Applications

With appropriate approval* the material can be used for manufacturing:

- Acid and corrosion resistant prototypes
- Unique or Series production parts
- Plant engineering
- Automotive applications
- Medical Technology
- Jewellery
- Components for Moulds



*The approval is application-specific, and it must therefore be carried out by the consumer/user. Approval of materials by LPE is not available.

Physical Properties

Colour	Grey
Type	Stainless Steel

Mechanical Properties (after recommended Heat Treatment)

	Heat Treatment ¹	Heat Treatment ²
Yield Strength $R_{p0.2}$	1250 ± 50 N/mm ²	820 ± 50 N/mm ²
Tensile Strength R_m	1350 ± 50 N/mm ²	900 ± 60 N/mm ²
Elongation A	5 ± 2 %	13 ± 2 %
Thermal Conductivity λ ³	16 W/mK ³	16 W/mK ³
Density (g/cm ³)	7.9	

Hardness

Hardness	43 – 46 HRC	31 – 35 HRC
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¹ Specification according to ASTM A564/A564M – 13 UNS S17400 for maximum elongation H900

² Specification according to ASTM A564/A564M – 13 UNS S17400 for maximum strength H1150

³ Specification according to the material manufacturer's data sheet

Material Composition

Component	Indicative Value (Weight in %)
C	0 - 0,07
Mn	0 - 1,00
P	0 - 0,04
S	0 - 0,03
Si	0 - 1,00
Cr	15,00 - 17,50
Ni	3,00 - 5,00
Cu	3,00 - 5,00
Nb+Ta	0,15 - 0,45
Fe	Balance

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Please be advised that all information provided in this document is representative of typical properties and as advised by the material manufacturer. Performance characteristics of these products may vary according to product application, operating conditions or with end use.

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