



1.4542 is a stainless martensitic age-hardenable chromium-nickel-copper stainless steel with high strength and toughness. This steel is used for the manufacture of:

- medical, surgical and dental instruments
- chemistry and petrochemistry
- tools
- aerospace

Through heat treatment, the properties of the material can be adapted to versatile requirement profiles..

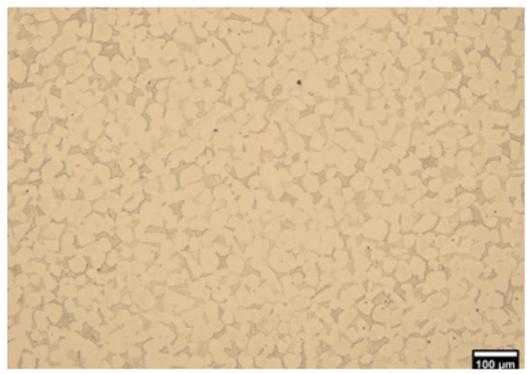
CHEMICAL COMPOSITION

NAME	C	Cr	Ni	Cu	Nb	Mn	Si	S	P	Fe
1.4542 (17-4PH)	< 0.07 %	15.0 - 17.5 %	3.0 - 5.0 %	3.0 - 5.0 %	0.15 - 0.45 %	< 1.0 %	< 1.0 %	< 0.015 %	< 0.04 %	BALANCE
DATA SHEET	0.023 %	16.3 %	4.2 %	4.0 %	0.18 %	0.5 %	0.4 %	0.005 %	0.014 %	

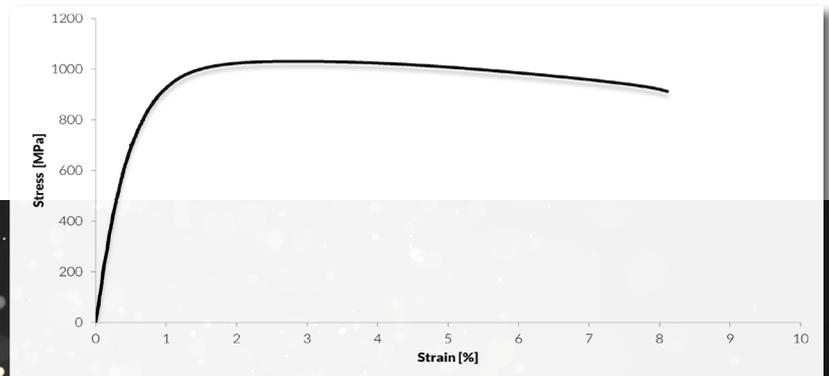
Werte in %

MECHANICAL DATA

	Tensile strength Rm [MPa]	Yield strength Rp0,2 [MPa]	Young's Modulus [GPa]	Fracture Elongation A [%]	Relative density [%]
VALUES	1067	863	163	7,3	> 98
STANDARD DEVIATION	32	91	46	1,3	-
STANDARD	DIN EN ISO 6892-1	DIN EN ISO 6892-1	DIN EN ISO 6892-1	DIN EN ISO 6892-1	Archimedes



Microstructure 17-4PH



Stress Strain Diagram

PROPERTIES

- high corrosion resistance
- high hardness
- good machinability
- high wear resistance

Disclaimer: These values are based on the test procedures, which are based on the specified ISO standards. They may vary in the event of deviations from these. Talk to our experts, who will be happy to clarify any open questions for you in advance!