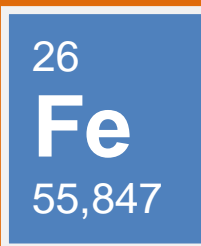




CL 92PH Precipitation hardening stainless steel

Precipitation hardening stainless steel powder (17-4 PH),
chemical composition according to ASTM A564 / A564M – 13 UNS S17400

CL 92PH is a precipitation hardening stainless steel for the
production of functional parts or medical instruments.



CHEMICAL COMPOSITION

Component	Indicative value (%)
Fe	Balance
C	0 – 0,07
Mg	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

RANGE OF APPLICATION

The material is used for manufacturing acid- and corrosion resistant prototypes, unique or series production parts in the following fields: Plant engineering, automotive industry, medical technology, jewellery and components for moulds.

TECHNICAL DATA AFTER RECOMMENDED HEAT TREATMENT

Yield point $R_{p0,2}^1$	1170 N/mm ²
Tensile Strength R_m^1	1310 N/mm ²
Elongation A^1	10 %
Thermal conductivity λ^2	16 W/mK
Hardness ¹	388 HB

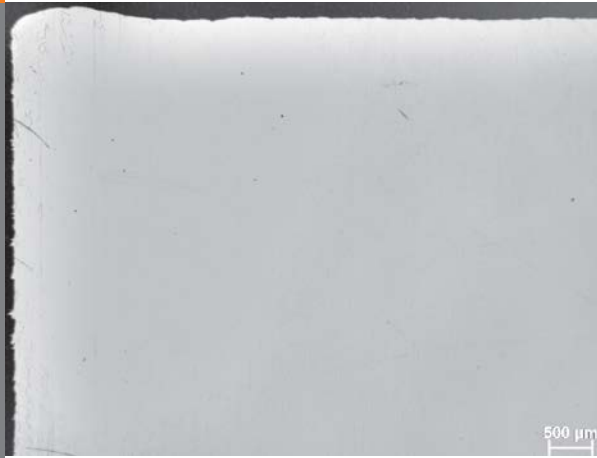
¹ Preliminary, specification according to ASTM A564/A564M – 13 UNS S17400

² Preliminary, specification according to the material manufacturer's data sheet

CL 92PH Precipitation hardening stainless steel

MICROSECTION

Testpiece
(x 20 magnification)



Testpiece
(x 100 magnification)



HEAT TREATMENT¹

CL 92PH is solution annealed at temperatures of 1025 – 1055°C, followed by a rapid cooling down in water, air or oil. Heat up to 480°C and maintain temperature for 1 hour. Subsequently allow the component cooling down at ambient atmosphere.

¹ Preliminary, specification according to ASTM A564/A564M – 13 UNS S17400

MICROSTRUCTURE

Components made from precipitation hardening stainless steel CL 92PH display a homogeneous, dense structure after they are manufactured by means of the additive manufacturing process.

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All of the specified figures are approximate figures. The figures which are provided reflect the current level of our knowledge and are dependent on process and machine parameters. The information provided on this material data sheet is therefore not binding and is not deemed to be certified.