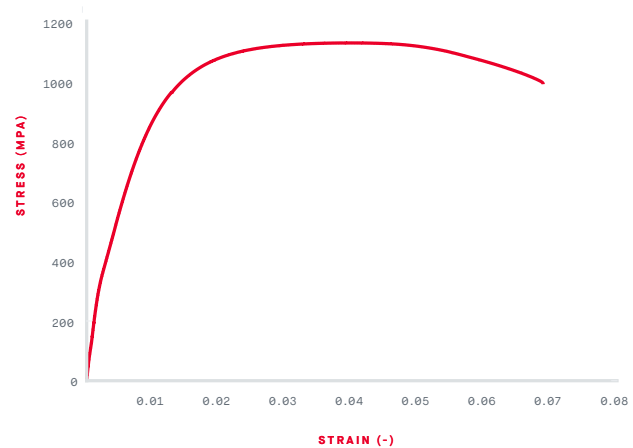


# 17-4 PH stainless steel

Characterized by its combination of strength, hardness, and corrosion resistance, 17-4 PH is a stainless steel ideal for a variety of applications—including tooling, molds, and production parts. In its as-sintered state, 17-4 PH material properties consistently meet industry standards.<sup>1</sup>



## Composition %

C	0.07 (max)
Cr	15.5 - 17.5
Ni	3 - 5
Cu	3 - 5
Mn	1.0 (max)
Nb + Ta	0.15 - 0.45

## Other standard designations

UNS S17400  
 EN 1.4542  
 ISO 4542-174-00-1

## Mechanical properties<sup>2</sup>

	standard	Studio System™ as-sintered	ASTM B883 as-sintered (min)	Wrought <sup>3</sup> for reference
Yield strength (MPa)	ASTM E8M	<b>660</b>	650	980
Ultimate tensile strength (MPa)	ASTM E8M	<b>1042</b>	795	1060
Elongation at break	ASTM E8M	<b>8.5%</b>	4%	8%
Young's modulus (GPa)	ASTM E8M	<b>195</b>	190 (typ)	200
Hardness (HRC)	ASTM E18	<b>37</b>	-	35
Density (relative)	ASTM B311	<b>98%</b>	-	100%

<sup>1</sup> per ASTM B883 minimum values.

<sup>2</sup> Tensile properties tested at an A2LA ISO 17025-certified, third-party laboratory.

<sup>3</sup> Grupo Lucefin. (2018). *Precipitation Hardening Stainless Steel*.  
[http://www.lucefin.com/wp-content/files\\_mf/1.4542pha63062.pdf](http://www.lucefin.com/wp-content/files_mf/1.4542pha63062.pdf)

End-use material performance is impacted (+/-) by certain factors including but not limited to part geometry and design, application and evaluation conditions, etc.

