

17-7PH

Technical Datasheet



Service. Quality. Value.

Precipitation Hardening Stainless Steel

Typical Applications

- Tooling in the Aerospace Industry
- CNC components
- Mould & gauge making
- General tooling
- Bulkheads
- Retaining rings
- Springs

Key features

- Excellent fatigue properties
- Good formability
- High strength & hardness
- Minimum distortion upon heat treatment.
- Good corrosion resistance

Product Description

17-7 PH is a precipitation-hardening stainless steel which combines high strength and hardness. The alloy has excellent fatigue properties, good corrosion resistance and is easily formed. Due to the alloys good mechanical and physical properties, 17-7PH is particularly popular in the aerospace sector and can be used in the manufacture of flat springs up to 315°C (600°F).

Availability

Bar

Corrosion resistance

Good

Formability

Good but work hardens rapidly and may require intermediate annealing in deep drawing or in forming intricate parts

Chemical Composition (weight %)

	C	Mn	P	S	Si	Cr	Ni	Al		
min						16.00	6.50	0.75		
max	0.09	1.00	0.04	0.03	1.00	18.00	7.75	1.50		

Mechanical Properties *

	A	TH1050	Condition RH 950	C	CH900
UTS, ksi (MPa)	130 (896)	200 (1379)	235 (1620)	220 (1517)	265 (1827)
0.2% YS, ksi (MPa)	40 (276)	185 (1276)	220 (1517)	190 (1310)	260 (1793)
Elongation, % in 2" (50.8 mm)	35	9	6	5	2
Hardness, Rockwell	B85	C43	C48	C43	C49

* Properties at typical room temperature

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

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 Smiths Biggleswade **01767 604 704**
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Quality & Testing:



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