PRECIPITATION HARDENING MARTENSITIC STAINLESS STEEL

17-4PH AISI 630 / 1.4542 / S17400

Precipitation hardening martensitic stainless steel

1310 MPa	**1000 MPa**	**17 % Cr + 4 % Cu**	**VIM + VAR**
H900 tensile	H1150 tensile	Precipitation hardening	On request

GRADE AND STANDARDS

Item	Detail
Designations	17-4PH / AISI 630 / UNS S17400 / 1.4542 / X5CrNiCuNb16-4
Standards	ASTM A564, A693, A705; AMS 5604, AMS 5643
Delivery condition	Solution annealed (Condition A), or aged to H900 / H1025 / H1075 / H1150
Melt route	EAF + AOD + vacuum degassing; VAR or VIM + VAR for aerospace
Typical use	Valve stems, pump shafts, gears, aircraft fittings, high-strength fasteners
Certificate	EN 10204 3.1, or 3.2 with witness testing on request

CHEMICAL COMPOSITION (% BY MASS)

C	Si	Mn	P	S	Cr	Ni	Cu	Nb+Ta
≤0.07	≤1.00	≤1.00	≤0.040	≤0.030	15.0–17.5	3.0–5.0	3.0–5.0	0.15–0.45

MECHANICAL PROPERTIES

Condition	Ageing	Tensile MPa	0.2 % proof MPa	Elongation %	Hardness
H900	480 °C, 1 h	1310	1170	10	40–47 HRC
H1025	550 °C, 4 h	1070	1000	12	35–42 HRC
H1075	580 °C, 4 h	1000	860	13	32–38 HRC
H1150	620 °C, 4 h	965	795	16	28–34 HRC

SUPPLY RANGE

Form	Size range	Condition
Round bar	Ø12.7–400 mm	Condition A / aged
Forged bar	Ø150–1000 mm	Condition A
Plate	Thickness 6–150 mm	Condition A / aged
Wire and strip	Ø1–12 mm	Condition A

INSPECTION AND CERTIFICATION

- EN 10204 3.1 mill certificate; 3.2 with witness testing on request
- Hardness and tensile results in the aged condition, not just Condition A
- Melt route declared - EAF+AOD+VD, VAR, or VIM+VAR
- Grain size to ASTM E112 for aerospace orders
- Ultrasonic inspection to AMS STD 2154 class AA on request

ORDERING INFORMATION

- Grade and standard
- Form and size - thickness x width x length, or diameter and cut length
- Quantity in pieces or kilograms
- Delivery condition and hardness window
- Certificate and inspection requirements

Hunan Fushun Metal Co., Ltd.
No. 1914-1919, Building C2, Yongsheng Commercial Plaza,
No. 222 Labor East Road, Changsha, Hunan, China
T +86-731-89903933 | M +86 178 7358 1838 (WhatsApp)
info@fushunspecialsteel.com | www.fushunspecialsteel.com

EN 10204 3.1 mill certificate with every shipment
Chemistry · mechanical properties · test results · heat number

Hardness map and ultrasonic inspection on request.
Values are typical for the grade; the certificate of the actual heat governs.