

13-8PH Stainless Steel (S13800)

Smiths High Performance



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Superior ductility with strength

Our 13-8PH (S13800) stainless steel stock is available in various tempers.

13-8PH is precipitation-hardened stainless steel which benefits from very high strength and toughness.

The alloy combines improved transverse toughness with ductility, which makes the material highly suitable for applications requiring high strength with good formability while offering good corrosion resistance. Typically alloy's microstructure is free of ferrite due to the product's chemical composition, lower carbon content and controlled melting practices. In the category of ferrous-based metals, 13-8PH provides excellent mechanical properties in extreme environmental conditions. The alloy may be machined in the annealed and hardened state. The alloy also possesses good hot working properties, making it easy to forge.

Corrosion Resistance:

13-8PH offers excellent oxidation resistance and the best stress corrosion resistance of all PH steels. A slight reduction in corrosion resistance is observed when the ageing temperature is raised.

Product Benefits:

- High strength
- Good ductility
- Good corrosion resistance
- Best stress corrosion cracking resistance of all PH steels
- Good hot working properties

About Smiths High Performance

Smiths High Performance is a leading stockholder and supplier of high-performance engineering materials. We are material supply chain partners supporting high-technology market sectors.

Further technical data available on
the reverse of this Datasheet



Motorsport Applications:

- High performance shafts
- Fasteners
- Valve parts
- Valve fittings
- Halo mountings



SCAN ME

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* Chemical Composition (weight, %)

	C	Mn	P	S	Si	Cr	Ni	Mo	Al	N
Min:						12.25	7.50	2.00	0.90	
Max:	0.05	0.10	0.010	0.008	0.10	13.25	8.50	2.50	1.35	0.01

* As per AMS 5629

* Mechanical Properties

Condition	Tensile Strength MPa	0.2% Proof Strength MPa	Elongation %	Reduction of Area %
H950	1,517	1,413	10	45
H1000	1,413	1,310	10	50
H1025	1,276	1,207	11	50
H1050	1,207	1,138	12	50
H1100	1,034	931	14	50
H1150	931	621	14	50

* Properties as per AMS 5629, longitudinal.

...where performance matters...

When you purchase high-performance materials from **Smiths High Performance**, you will join some of the biggest and best global engineering companies. We are a Tier 1 supply chain partner to the world's leading motorsport companies. Our unique business structure and ethos allow us to offer services otherwise unavailable in this market sector.

www.smithshp.com
info@smithshp.com


Unit 3, Juno Place
Stratton Business Park
Biggleswade SG18 8XP

Tel: +44 (0)1767 604 708



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