AMS 5629 - Ph 13-8MO Stainless Steel

Typical Applications

Fasteners

Valves

Fittings

Petrochemical Components

Aircraft Structural parts

PH 13/8 MO is a precipitation hardening stainless steel alloy that conforms to the AMS 5629, AMS 5864, AMS 5862 specifications.

This material is characterised by excellent strength, corrosion resistance, and toughness at both room and elevated temperatures.

PH 13/8 MO (uns s13800) is often used in aerospace, chemical processing, and power generation applications where high strength and corrosion resistance are essential. The material is not particularly easy to work with due to its high strength and toughness, which can make cutting and machining difficult. However, with the proper equipment and techniques, it is possible to fabricate and form PH 13/8 MO into complex shapes and components.

It is a medium to high strength material achieved through appropriate ageing treatments (see table below) and contains very good resistance to stress corrosion. PH 13/8MO stainless steel is produced by Vacuum Induction Melting (VIM) followed by Vacuum Arc Remelting (VAR).

Technical specification

Related Specifications

AMS 5629

AMS 5862

UNS S13800

W.Nr 1.4534

Specific Gravity

7.76 g/cm3

Chemical Composition (WT %)

	Min	Max
C	-	0.05

Si	-	0.10
Mn	-	0.10
P	-	0.01
S	-	0.008
Cr	12.24	13.25
Mo	2.00	2.50
Ni	7.50	8.50
Al	0.90	1.35
N	-	0.010
Fe	Bal	-

Typical Mechanical Properties in the Annealed Condition

	-	-	H950	H1000	H1025	H1050	H1100	H1150
0.2% Proof Stress	MPA	Min	1413	1310	1207	1138	931	621
Tensile Strength	MPA	Min	1517	1413	1276	1207	1034	931

Elongation	%	Min	10	10	11	12	14	14
Reduction of area	%	Min	45	60	50	50	50	50
Reduction of area	%	Min	35	40	45	45	50	50
Hardness	HRC	Min	45	43	41	40	34	30

Need more information? ***Get in touch***

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