

# 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 5864**

**UNS S13800**

**W.Nr 1.4534**

### *Specific Gravity*

**7.76 g/cm<sup>3</sup>**

### *Chemical Composition (WT %)*

	Min	Max
<b>C</b>	-	0.05

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

*Typical Mechanical Properties in the Annealed Condition*

			H950	H1000	H1025	H1050	H1100	H1150
<b>0.2% Proof Strength</b>	MPA	Min	1413	1310	1207	1138	931	621
<b>Tensile Strength</b>	MPA	Min	1517	1413	1276	1207	1034	931

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

Need more information? **[Get in touch](#)**

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## General Enquiries

+44(0) 1525 217 556

[Email us here](#)

## Head Office

40 Eden Way  
 Chartwell Business Park  
 Leighton Buzzard  
 Bedfordshire  
 LU7 4FY

T: +44 (0)1525 217 556

## Conversion Centre

Suite 2 Meadowhall Riverside  
 Meadowhall Road  
 Sheffield  
 South Yorkshire  
 S9 1BW

T: +44 (0)1143 030 320

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