

# Product Reference Guide



+44 (0)114 290 9200  
+44 (0)114 290 9290  
info@maher.com

Alloy	ASTM	UNS	SEA AMS	British Standard	Werkstoff	Mechanical Properties		
						0.2% PS MPA Minimum	UTS MPA Minimum	Hardness Minimum
<b>Alloy 718</b>	B637	N07718	5662 5663		2.4668	Oil Patch 825 Aero 1150	1034 1425	40Rc Max 41Rc Min
<b>Alloy 625</b>	B564 B446	N06625	5666	3076 NA21	2.4856	Up to & incl 100mm 413	827	
						Over 100mm 344	758	
<b>Alloy 825</b>	B425	N08825		3076 NA16	2.4858	241	586	
<b>Alloy 400</b>	B164	N04400		3076 NA13	2.4360	170	480	
<b>Alloy K500</b>	B865	N05500	4676	3076 NA18	2.4375	Up to & incl 25mm 620	900	
						Over 25mm to 110mm 585	900	
						Over 110mm to 300mm 500	830	
						Available in various heat treated conditions. Refer to www.maher.com for mechanical properties		
<b>Alloy R41®</b>		N07041	5712 5713		2.4973	793	1241	38-42Rc
<b>Waspaloy</b>		N07001	5708 5706		2.4654	1040	1430	42Rc Max
<b>Alloy 80A</b>	B637	N07080		3076 NA20 HR HR 601	2.4952 2.4631	590	980	
<b>Maraging C250</b>	A646		6512 6520	S162	1.6359	1760	1815	
<b>Maraging C300</b>	A579		6514 6521		1.6358 1.6354	1975	2020	
<b>Maraging C350</b>	A579		6514		1.6356	2275	2340	
<b>A286</b>	A453 A638 Grade 660B Grade 660D	S66286	5731	HR 52/650	1.4943 1.4944	724	1000	30-35Rc
			5732					
<b>Titanium 6Al-4V Grade 5</b>	B348		4928 T-9047	TA11 TA12 TA7252	3.7164	828	897	
<b>Titanium 6Al-4V ELI</b>	F136 B265		4907	7252		759	828	
<b>Kovar®</b>	F15				1.3981	345	517	
<b>Invar®</b>	F1684				1.3912	276	448	
<b>Super Invar®</b>	F1684					276	483	
<b>Alloy 42®</b>	F30				1.3917	250	490	

Nickel Based

Maraging

Specialist Alloys

Titanium

Controlled Expansion Alloys

This data is not intended for specification purposes and values should only be considered as typical or average. Applications suggested for the materials described are made solely for evaluation and should not be construed as warranties, either limited or express, or recommendations for fitness for these or other applications. Materials must be tested under actual service conditions to determine suitability for a particular purpose. Please refer to www.maher.com for registered trade names.

**For technical datasheets, please refer to [www.maher.com](http://www.maher.com)**



Alloy	ASTM	UNS	SEA AMS	British Standard	Werkstoff	Mechanical Properties		
						Diameter mm	0.2% PS MPA Minimum	UTS MPA Minimum
NES 833 DEF STAN 02-833		C63000		2874 EN12163		Over 15 Up to 25	325	680
						Over 25 Up to 100	295	635
						Over 100	245	620
NES 834 DEF STAN 02-834						Over 15 Up to 50	275	525
						Over 50 Up to 100	235	525
						Over 100	220	525
NES 838 DEF STAN 02-838		C51000		2874 PB102		6 to 18	410	500
						18 to 40	380	460
						40 to 60	320	380
						60 to 75	250	350
NES 835 Hiduron 191®						Over 15 Up to 125	430	725
						Over 125	400	710
NES 780 DEF STAN 02-780 (70/30)		C71500		2874 CN107		Over 28 Up to 180	130	350
						Over 180 Up to 500	120	330
BS B23 DTD 197 CA104		C63000		2874 CA104 EN12163		Over 6 Up to 18	400	700
						Over 18 Up to 80	370	700
						Over 80	320	650
DTD 498				B25		416	586	
AMS 4616			4616			138	386	
AMS 4640	B124	C63000	4640			Up to 25.4	469	758
						Over 25.4 Up to 50.8	414	758
						Over 50.8 Up to 76.2	379	724
						Over 76.2 Up to 127	345	689
AMS 4590		C63020	4590		1.4534 1.4548	Up to 25.4	689	931
						Over 25.4 Up to 50.8	655	896
						Over 50.8	621	896
						Up to 101.5		
MSRR 8501				B25		385	555	
MSRR 8503			4640	B23		410	695	
MSRR 8506		C90700		1400 PB1			280	
PH 13/8 Mo		S13800	5629		1.4545	Available in various heat treated conditions. Refer to <a href="http://www.maher.com">www.maher.com</a> for mechanical properties		
17/4 PH	A564-XM12 A693-AM12 A705-XM12		5643 5622		1.4548			
15/5PH	A564-XM12 A693-AM12 A705-XM12		5659		1.4545			

Copper Based

PH Grades