

ALLOY 188 COBALT ALLOY - AMS 5772

Alloy 188 is known for its superior resistance to corrosion and oxidation at elevated temperatures, this is due to its composition, containing significant quantities of cobalt and chromium. This allows Alloy 188 to be well suited for high temperature environments. The alloy maintains structural integrity when exposed to extreme heat, oxidising agents, and corrosive media that would rapidly degrade many conventional materials.

Cobalt Alloy 188 falls under the category of superalloys - an elite family of metallic composites purpose-engineered to endure extraordinarily hostile operating environments and withstand severe mechanical stresses. Standard alloys would rapidly deteriorate under such punishing conditions, yet this superalloy exhibits remarkable resilience in the face of extraordinarily hostile environments that would compromise ordinary materials. Cobalt Alloy 188 exhibits exceptional resilience where standard materials would simply fail.

The presence of chromium, a key component at roughly 22%, allows a tenacious oxide layer to form on the alloy's surface, this acts as a barrier, which prevents corrosion. Cobalt itself is highly resistant to chloride-induced corrosion, a type of degradation that plagues many other alloys.

Industries that rely on Cobalt Alloy 188 include aviation, where it sees use in aircraft engines and hot section components and in the gas industry where it used in turbine engines.

Specific Gravity												
9.14g/cm ³												
Typical Applications						Related Specifications						
Aerospace Gas Turbine Engines						AMS 5608 AMS 5772						
Chemical Composition (Wt %)												
	C	Mn	Si	P	S	Cr	Ni	W	La	B	Fe	Co
Min	0.05	-	0.20	-	-	20	20	13	0.02	-	-	-
Max	0.15	1.25	0.50	0.02	0.015	24	24	16	0.12	0.015	3	Bal
Typical Mechanical Properties												
	0.2% Proof Stress		Tensile Strength		Elongation		Hardness					
	MPa		MPa		4D		HB					

Bars	379	862	45%	302

* This data has been supplied in good faith and is indicative only. It has been provided for general information purposes only and is not to be relied upon in place of the full specification. Mechanical properties can vary considerably with different supply conditions such as heat treatment or temper and product dimensions.

No liability will be accepted by Dynamic Metals Ltd in respect of any action taken by any third party in reliance of any of the data provided.

The information provided in this datasheet has been taken from multiple recognised sources. No guarantee is given that the information is from the latest issue of these sources and no guarantee is given that the information in the datasheet is accurate or up to date.

Material supplied by Dynamic Metals Ltd may vary significantly from this data but will conform to the relevant and applicable standards. All transactions are subject to Dynamic Metals Ltd latest Terms and Conditions of Sale.

As the products detailed may be used for a wide variety of purposes and as Dynamic Metals Ltd has no control over their use; Dynamic Metals Ltd specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose, whether expressed or implied.

Advice given by Dynamic Metals Ltd to any third party is given for that party's assistance only and without liability on the part of Dynamic Metals Ltd.

All transactions are subject to Dynamic Metals Ltd latest Terms and Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available by request or by downloading from our website.

General Enquiries

T: +44 (0) 1525 217 556 [\(tel:+4401525217556\)](tel:+4401525217556)

E: sales@dynamicmetalsltd.com [\(mailto:sales@dynamicmetalsltd.com\)](mailto:sales@dynamicmetalsltd.com)



UK Address:

Head Office

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

T: +44 (0)1525 217 556 [\(tel:+441525217556\)](tel:+441525217556)

Conversion Centre

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

T: +44 (0)1143 030 320 [\(tel:+4401143030320\)](tel:+4401143030320)

Registered Office (only)

The Granary
Crowhill Farm Ravensden Road
Wilden
Bedfordshire
MK44 2QS

T: +44 (0)1525 217 556 [_tel:+441525217556](tel:+441525217556)



[\(/media/zn2dbklo/cyber-essentials-certified-plus.png\)](/media/zn2dbklo/cyber-essentials-certified-plus.png)



[\(/media/dyelbliq/cyber-essentials-certified.png\)](/media/dyelbliq/cyber-essentials-certified.png)