

Think **future**. Think aluminium.

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HULAMIN

M82 PRECISION PLATE

ROLLED PRODUCTS

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M82 PRECISION PLATE

To satisfy the requirements of CNC machines and machine shops worldwide, Hulamin offers M82 - a heat treated plate in alloy A6082 T651 that features excellent machinability.

M82 is ideally suited for a wide range of hi-tech applications including precision tooling and components used in the electronic vacuum chamber and pneumatic industries.

Hulamin's M82 has been designed to meet the following requirements:

- Stability - even during intricate machining operations - no wastage of finished components.
- Consistent machinability between plates supplied in any batch - no need to change machine setups.
- High standard surface finish - aesthetically pleasing, needs no further grinding or finishing, anodises well.
- Tight tolerances - maximises the use of metal for the production of machined components.

This all adds up to a product that is a cost effective solution for aluminium 6082 plate that can be machined accurately.

CHEMICAL COMPOSITION (IN WEIGHT %)

%	Cu	Mg	Si	Fe	Mn	Zn	Ti	Cr
min		0.6	0.7		0.4			
max	0.10	1.2	1.3	0.50	1.0	0.20	0.10	0.25

PHYSICAL PROPERTIES

Property	Value	Unit
Density	2.70	g/cm ³
Thermal Conductivity at 100°C	180 - 189	W/m.K
Electrical Resistivity at 20°C	0.038 x 10 ⁻⁶	Ωm
Modulus of Elasticity	70	GPa
Coefficient of thermal expansion	24 x 10 ⁻⁶	/°C
Melting Range	555 - 650	°C



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MECHANICAL PROPERTIES

Properties	5mm - 12.5mm	Over 12.5mm	Unit
Ultimate Tensile Strength (min)	300	295	MPa
0.2% Yield strength (min)	255	240	MPa
Elongation (min)	9	8	%
Typical Fatigue Strength	110		MPa
Typical Hardness Brinell	95		HB

PROCESSING ATTRIBUTES

Characteristics	
Corrosion Resistance	Good
Weldability	Good
Formability	Good
Machinability	Good
Anodising	Good
Brazeability	Good

SIZES AVAILABLE

Thickness	Width	Length
5.0 to 60.0mm	1250 / 1270 / 1520mm	2520 / 3020 mm

Flatness

M82 plate undergoes levelling and a controlled stretch operation, ensuring plates with superior flatness and stability.

Machinability

M82 is easily cut, punched drilled and machined using standard machining and job shop equipment. The plate is manufactured to maintain stability after precision machining operations.

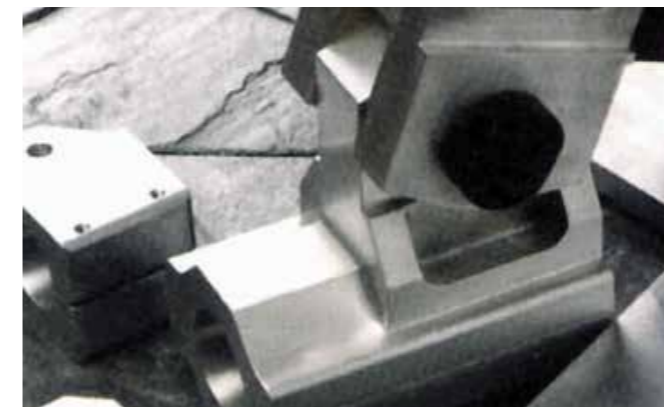
Surface Finish

M82 is supplied with a finished surface finish, which eliminates the need for any further machining or grinding. Tests have proved that this finished surface anodises well.

Dimensional Tolerance

M82 is rolled to tight tolerances guaranteed to 0.7 x EN Specification, for thickness up to 25mm.

For 25 mm to 60 mm thickness, EN 485.3 specification is guaranteed.



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