

DESCRIPTION

MAX5® cast aluminum mold blocks offer an **excellent dimensional stability**. This 5083 alloy provides strength, weldability, machinability, and a great anodizing response. Internally low levels of porosity are guaranteed by our casting supplier. Easy to recycle, it has a higher residual value at the end of its useful life. PCP quality department controls each block with our proprietary ultrasonic scanner. The low density of the 5000 series aluminum is an advantage over other aluminum mold products.

Lastly, having a precision sawed surface, **MAX5®** can allow for a significant cost savings since surface machining may not be required.

PROCESSING CHARACTERISTICS

Weldability

WIG/MIG	Very good
By resistance	Very good

Anodizing

Hard anodizing	Excellent
Decorative	Good

Polishing ability

Very good

Corrosion resistance

Inland atmosphere	Excellent
Marine atmosphere	Good

Machinability

Excellent

To obtain a smooth surface on **MAX5®**, high cutting speeds and sintered carbide cutting tools are recommended.

CHEMICAL COMPOSITION (Weight-%)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti+Zr
max. 0.4	max. 0.4	max. 0.1	0.4	4	0.04	max. 0.25	max. 0.15

AVAILABILITY

MAX5® mold products are available in temper O3 (homogenized) aluminum in the following size:

Thickness	102 mm to 1080 mm
Widths	up to 2591 mm
Lengths	up to 8990 mm

Other thicknesses, widths and lengths may be available upon inquiry.

PHYSICAL PROPERTIES (Typical values)

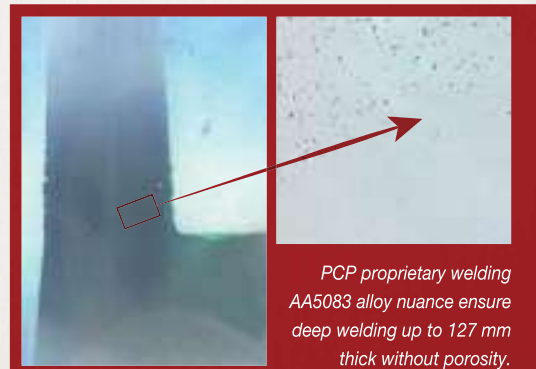
Density	2,66 g/cm ³
Elastic modulus	71000 MPa
Coefficient of thermal expansion (20°C-100°C)	23,76 µm/m·°C
Thermal conductivity (20°C)	120 W/m·°C
Electrical conductivity (20°C)	27% IACS

MECHANICAL STRENGTH (Typical values)

Ultimate Tensile Strength	283 MPa
Yield Strength	124 MPa
Elongation	16%
Brinell Hardness	70 HB

TOLERANCES

Thickness	+3,18 mm / -0 mm
Width and Length	+6,35 mm / -0 mm
Roughness	≤ 25 µm
Surface condition	Precision sawed
Edge condition	Precision sawed



Prolonged exposure to temperatures exceeding 70°C can provoke susceptibility to intercrystalline corrosion. The information in this publication does not imply a guarantee of properties or capability for fabrication, assembly or application in particular cases. Design rules presented must be take into account by the user. PCP Aluminium reserves the right to modify this data sheet without prior warning.

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