

ACP 5080

Industry leading flatness and tolerances combined with excellent dimensional stability.

High precision low stress aluminium cast plate, ACP 5080, is precision surface machined on both sides to industry leading precise tolerance standards. Fine grain structure, low porosity and excellent machining characteristics all define the cost saving and value-added attributes of ACP 5080. Superb industry leading material dimensional stability is inherent in every plate of ACP 5080; thanks to proprietary processes and manufacturing control, our flatness and tolerances are industry leading, predictable, and precise. Each plate is inspected and protected on both sides finally.

alimex[®]
PRECISION IN ALUMINIUM

ACP 5080

INDUSTRY LEADING FLATNESS AND TOLERANCES COMBINED WITH EXCELLENT DIMENSIONAL STABILITY.

Manufactured in accordance with the technical specifications of DIN SPEC 91529.

Chemical Composition

EN AW-5083 (AlMg4.5Mn0.7), acc. to DIN EN 573-3/3.3547

Material condition

O3 in accordance with DIN EN 515

Material Properties

Machinability	very good (HSC/HPC excellent)
Weldability (TIG, MIG)	good (with S Al 5183)
Anodising Properties	good, not decorative
Polishing	very good
Corrosion Resistance	very good
Eroding Properties	good

Typical Mechanical Properties for standard sizes

Tensile Strength R_m	240 - 290 MPa (N/mm ²)
0.2 % Yield Strength $R_p 0.2$	110 - 130 MPa (N/mm ²)
Elongation A	15 (+/- 5) %
Brinell Hardness	74 (+/- 5) HB

Typical Physical Properties

Density	2.66 g/cm ³
Thermal Conductivity	110 - 140 W/(mK)
Electrical Conductivity	16 - 19 MS/m (m/Ω mm ²)
Modulus of Elasticity	~70,000 N/mm ²
Coefficient of Thermal Expansion	24.2 * 10 ⁻⁶ /K

Standard Sizes

Thickness	5 - 220 mm
Width	1520 - 2160 mm
Length	3020 - 4050 mm
Standard plate formats	1520 mm x 3020 mm 1570 mm x 3670 mm 2160 mm x 4000 / 4050 mm

Special sizes

Width	up to 2600 mm
Length	up to 6000 mm
(Maximum individual weight 5 t)	

Tolerances for standard sizes

Surface Finish R_a	≤ 0.25 μm
Tolerance in Thickness	+/- 0.1 mm
Flatness	≤ 8 mm thickness ≤ 0.2 mm > 8 - 12 mm thickness ≤ 0.15 mm > 12 - 220 mm thickness ≤ 0.13 mm (Linear measured section 1 m)
Tolerance in Width for Plates	0/+10 mm
Tolerance in Length for Plates	0/+10 mm
Tolerance (L/W) for cut pieces:	≤ 150 mm thickness DIN ISO 2768-m > 150 mm thickness 0/+3 mm (Linear measured section 1 m)

Other tolerances on request.

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