

ACP 6000

A large industrial warehouse at night, illuminated by bright overhead lights. A forklift is in the foreground, carrying a stack of large, rectangular aluminum plates. The warehouse has a high ceiling and large open doors. The scene is captured with a slight motion blur, suggesting activity within the facility.

*Low inherent internal stress
for high dimensional stability
during extreme machining.*

ACP 6000 is an aluminium precision cast plate that is precision-milled on both sides and has a comparatively high abrasion resistance. It is also characterised by low stress and high dimensional stability, even with complicated machining. To protect the precision-milled surfaces, all plates are provided with a protective film on both sides.

alimex[®]
PRECISION IN ALUMINIUM

ACP 6000

LOW INHERENT INTERNAL STRESS FOR HIGH DIMENSIONAL STABILITY DURING EXTREME MACHINING.

Manufactured based on the technical specifications of DIN SPEC 91529.

Chemical Composition

Al-alloy type 7xxx

Material Properties

Machinability	very good
Weldability (TIG, MIG)	adequate (with S Al 4043A)
Anodising Properties	good
Polishing	good
Corrosion Resistance	adequate
Eroding Properties	good
Dimensional Strength	very good

Typical Mechanical Properties

Tensile Strength R_m	min. 166 MPa (N/mm ²)
0.2 % Yield Strength $R_p 0.2$	min. 105 MPa (N/mm ²)
Elongation A	min. 3 %
Brinell Hardness	65 (+/- 5) HB

Typical Physical Properties

Density	2.80 g/cm ³
Thermal Conductivity	140 W/(mK)
Electrical Conductivity	19 - 24 MS/m (m/Ω mm ²)
Modulus of Elasticity	~71,000 N/mm ²
Coefficient of Thermal Expansion	24.6* 10 ⁻⁶ /K

Standard Sizes

Thickness	6 - 220 mm
Width	1570 mm
Length	3670 mm

Tolerances

Surface Finish R_a	≤ 0.3 μm
Tolerance in Thickness	+/- 0.1mm
Flatness	≤ 8 mm thickness ≤ 0.40 mm
	> 8 - 12 mm thickness ≤ 0.25 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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