

ACP 5080S / ACP 5080RS

Developed for innovative, high-end industries like the Electronics, Semiconductor, Solar, and Display Panel industries, ACP 5080S and ACP 5080RS provide material solutions for the most challenging and critical applications. Through decades of practical application experience, continuous material research, development, and testing, ACP 5080S and ACP 5080RS provide good mechanical and physical properties as compared with similar competitors' cast and rolled aluminum plates. Material excellence and superiority is achieved through the proprietary smelting, manufacturing, processing and handling procedures and specifications employed in the production of this grade.

Chemical Composition

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

Material Properties

Machinability	excellent
Weldability (TIG, MIG)	good (with S Al 5183)
Anodising Properties	good (not decorative)
Polishing	excellent
Corrosion Resistance	excellent
Eroding Properties	good
High Speed Cutting Properties	excellent
Electrical Discharge Machining (EDM)	good
Etching	good
Cryogenic	excellent
Diffusion Tightness	excellent

„ACP 5080S has been developed and is continuously tested to meet the demanding requirements of high-tech industries.“



ACP 5080S / ACP 5080RS

Typical Mechanical Properties

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 5 %	15
Brinell Hardness HB	70

Typical Physical Properties

Density	96* 10 ⁻³ lb/in ³
Thermal Conductivity	63-81 Btu/(ft* h°F)
Electrical Conductivity	~35% IACS
Modulus of Elasticity	10.3* 10 ³ ksi
Coefficient of Thermal Expansion	13.5* 10 ⁻⁶ /°F

Thickness Range & Sizes

Thickness between 0.2362" (ACP 5080S) / 0.3150" (ACP 5080RS) and 22.44" (ACP 5080RS). Plates and pre-cut sizes in every dimension depending on the block formats.

Thickness		max.Width*		Length*
22.44"	x	51.97"	x	118.90"
22.44"	x	61.81"	x	144.49"
22.44"	x	85.04"	x	157.48"

> 85.04" Width: Please see the product information for ACP 5080 GIANT / ACP 5080R GIANT

Tolerances

ACP 5080S

Surface Finish R_a	$\leq 0.3 \mu m$
Tolerance in Thickness	+/- 0.0039"
Flatness	0.2362"-0.4724" thickness $\leq 0.0157^{***}$ > 0.4724"-3.94" thickness $\leq 0.0051^{***}$
Tolerance (W/L) for Sized Cuts	DIN ISO 2768-m (closer on request)

ACP 5080RS

Surface	sawn on all sides
Tolerance in Thickness	+0.1181"/- 0" (closer on request)
Tolerance (W/L) for Cut Pieces	+0.1181"/- 0" (closer on request)

Special Features

Especially homogenized / Stress relieved / Ultrasonic tested /
Reduced micro-porosity / Tested continuously

* Further dimensions on request. Subject to technical change.

** Linear measured section 39.37"