



aludur

ALUDUR a brand name of Altek Metal for cast plates.

aludur **ALT 5083**

A fine grain structure and low porosity characterize the aluminium ALT 5083 cast blocks and sawn plates. By adopting and extended thermal heat treatment the material becomes homogenized and thermally stress relieved. The dimensional stability of the material obtains optimal. Offered in an extraordinary range of sizes, which are readily available, along with superior mechanical and physical properties, which add to the further major advantages of using ALT 5083.

MATERIAL PROPERTIES

Form Stability	Very Good
Machinability	Very Good
Eroding Resistance	Good
Welding (Gas/TIG/MIG/Resistance)	Poor / Good / Good /Good
Corrosion Resistance (Seawater / Weather)	Very Good / Very Good
Use of Temperature (max°C long / short Term)	180 / 280
Anodising (Not Decorative)	Good
Polishability	Very Good
Contact with Food	Yes

MECHANICAL PROPERTIES

Tensile Strength R_m	230-290 MPa
0,2% Yield Strength	110 - 130 Mpa
Elongation A 5%	10 - 14
Hardness Brinell	69 - 73

PHYSICAL PROPERTIES

Density	2,66 g/cm ³
Thermal Conductivity	110-130 W/m *K
Module of Elasticity	70,000 N/mm ²
Coefficient of Thermal Expansion	24,2 10 ⁻⁶ /K
Electrical Conductivity	16-19 (m / Ω mm ²)
Specific Heat Capacity	900 (J/ kg * K)

CHEMICAL COMPOSITION

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

THICKNESS RANGES & SIZES

Thickness between 8 mm to 560 mm.
Plates and precut sizes in every dimension depending on the block formats. 560x1300x4500 mm
600x1750x3810 mm

TOLERANCES

Surface Roughness Ra 10 - 15 μ m

Thickness Tolerance

+/-0,2 mm up to 140 mm thickness (Closer on request)
+/-0,3 mm over 140 mm thickness (Closer on request)

Width Tolerance

-0/+1 mm up to 180 mm thickness
-0/+10 mm over 180 mm thickness (Closer on Request)

Length Tolerance

-0/+15 mm (Closer on Request)

MAIN FIELDS OF APPLICATION

- + Aircraft Tooling
- + Automotive Tooling
- + Base Plates, Side Plates and Indexing Tables
- + CNC Routing Tables
- + Checking Fixtures, Gauges and Templates
- + Dielectrics
- + Electronics
- + Food Machinery Parts
- + Heating and Cooling Platens
- + Medical Instrumentation
- + Packaging Machinery and Moulds
- + Plastic Components Manufacturing
- + Printing Machinery
- + Robotics
- + Vacuum Chucks

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