



5083 Aluminium Cast Block

Material Data Sheet

Cast Block 5083 is stress relieved by a special heat treatment process which eliminates the necessity for further annealing after machining. Continual ultrasonic and micro-structural examinations guarantee a constant quality standard. This plate is supplied as a sawn block on 6 sides. Cast Block 5083 is typically used for injection moulds for plastic prototypes, deep drawing moulds, casting moulds, foaming and blowing moulds for low pressure processes and Styrofoam moulds.

Mechanical Properties

Tensile Strength Rm (Mpa)	Typical 230 - 250
Yield Strength Rp0.2 (Mpa)	≥ 125
Modulus of Elasticity (Mpa)	~ 70000
Elongation A5 (%)	≥ 10
Brinell Hardness HBS 2.5/62.5/30	≥ 69

Physical Properties

Coefficient of Thermal Expansion	24.2
Thermal Conductivity (W/mK)	110 - 140
Electrical Conductivity (MS/m)	16 - 19
Density (g/cm ³)	2.66

Tolerances

Length & Width	- 0/ +6mm
Thickness	Up to 600mm - 0/ +10mm

General Information

Surface	Sawn on 6 faces
Class of Alloy	Non Heat Treatable
Temper	Homogenized & Stress Relieved

Size Range

Thickness	20 - 1000mm
Length	Up to 4500mm
Width	Up to 2500mm