

# HIGH QUALITY CAST AND PRECISION MACHINED PRODUCT –

Developed for machine construction, jigs & fixtures, tools and electronic industries applications with:

- high strength
- high corrosion resistance
- improved ductility
- improved machinability

## Typical Fields of Application

Precision parts

Where-ever form stability and stress relieved material combined with higher strength values are required

Matching panels of special purpose machines

All kinds of gauges, modelling boards, indexing tables

All kind of calibers



<b>Trademark</b>	<b>G.AL® C250</b>	
Alloy		EN/AA 5083
	Type of Alloy	non heat treatable
	Temper	homogenised & stress relieved
Surface		precision milled roughness $R_a < 0,4 \mu\text{m}$ , foiled top/bottom

**Mechanical Properties<sup>1</sup>**

Yield strength $R_{p0,2}$	[ksi]	16 - 19
Ultimate tensile strength $R_m$	[ksi]	33 - 42
Elongation A	[%]	10 - 15
Hardness HBW	[2,5/62,5]	68 - 75

**Physical Properties**

Density	[lbs/cu in.]	0.096
Module of Elastivity	[GPa]	10.2
Coefficient of thermal expansion	[ $10^{-6}/^{\circ}\text{F}$ ]	13.1
Thermal conductivity	[BTU.in/ft <sup>2</sup> hr <sup>2</sup> °F]	760 - 900
Specific heat capacity	[BTU.in/ft <sup>2</sup> hr <sup>2</sup> °F]	0.214

**Processing Characteristics**

Form stability	1 - 2
Machinability	2
Erodability	1
Welding (Gas / TIG / MIG/ resistance / EB)	4/2/2/2/1
Corrosion resistance (seawater / weather / stress cracking)	1/1/3
Use of temperature (max. °F long / short termes)	350/530
Formability	6
Anodizing <sup>3</sup> (technical / decorativ / hard)	2/4/2
Polishability	2 - 3
Etching	4 - 5
Contact with food <sup>4</sup>	yes

**Tolerances**

Thickness in [in.]	Flatness [in.] <sup>4</sup>	Thickness [in.]	Width & Length [in.]
≤ 0.500	< 0.015	+/- 0.004	+ 0.375
> 0.500	< 0.005	+/- 0.004	+ 0.375

**Standard Sizes**

	60.5 x 120.0	in thickness of 0.197 - 4.000 in.
	48.5 x 144.5	in thickness of 0.197 - 4.000 in.
	61.8 x 144.5	in thickness of 0.197 - 4.000 in.
	85.0 x 157.4	in thickness of 0.375 - 4.000 in.

<sup>1</sup> at room temperature

<sup>2</sup> Legend (1) = very good (6) = inapplicable

<sup>3</sup> no warranty towards optical demands

<sup>4</sup> according to DIN EN 602

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