CERTAL®

Alloy´s Characteristics	
Alloy	EN AW 7022 (special type)
Type of Alloy	heat treatable
Temper	T651
Surface	rolled skin

Mechanical Properties [1]		Typical values
Yield strength $R_{p0,2}$	[MPa]	400 – 495
Ultimate tensile strength R_m	[MPa]	490 – 555
Elongation A_{50}	[%]	6 – 9
Hardness HBW	[2,5/62,5]	165 – 170

Physical Properties [1]		Typical values
Density	[g/cm³]	2.76
Module of elasticity	[GPa]	72
Electrical conductivity	[m/Ω · mm²]	18 – 22
Coefficient of thermal expansion	[$K^{-1} \cdot 10^{-6}$]	23.6
Thermal conductivity	[W/m · K]	120 – 150
Specific heat capacity	[J/kg · K]	862

Processing Characteristics [2]	
Dimensional stability	2 – 3
Machinability	1
Erodability	1
Weldability (Gas / TIG / MIG / Resistance / EB)	6 / 6 / 6 / 2 / 3
Corrosion resistance (seawater / weather/ stress cracking)	5 / 5 / 4
Use at temperatures (max °C long/short terms) [3]	90 / 120
Anodising (technical / decorative / hard-) [4]	3 / 6 / 2
Polishability	1
Etching	1 – 2
Contact with food (according to EN 602)	no

Tolerances			
Thickness in [mm]	Flatness [mm] [5]	Thickness [mm]	Width & Length [mm]
< 150	DIN EN 485-3	DIN EN 485-3	-0/+20 & -0/+10
Zuschnitte			DIN ISO 2768-1m

Standard Stock Sizes		
Plate Dimension [mm]	1.520 × 3.020	in thickness of 8 – 100 mm
	1.400 × 3.020	in thickness of 110 mm
	1.200 × 3.020	in thickness of 120 mm
	1020 × 3020	in thickness of 130 mm
	950 × 3.020	in thickness of 140 mm
Plate Thickness [mm]	8, 10, 12, 15, 20, 25, 30, 35, 40, 45, 50	
	60, 70, 80, 90, 100, 110, 120, 130, 140	
Other dimension upon request		

Date: 12.07.2016

1) Typical values at room temperature.
2) Ratings evaluation rating from 1 (very good) to 6 (inapplicable).
3) Without loss of strength after cooling down.
4) Technical anodising only - no warranty towards optical demands.
5) Surface flatness for whole plates is measured with a special, 1 meter long, digital flatness ruler.