EN AW-6082

Alloy's charcteristics	
Alloy:	EN AW-6082 [AlSi1MgMn]
Type of Alloy:	heat treatable
Temper:	T651
Surface:	rolled skin

Mechanical Properties 1)		
Yield strength $R_{p0,2}$	[MPa]	240 – 260
Ultimate tensile strength R_m	[MPa]	295 – 310
Elongation A_{50}	[%]	7 – 10
Hardness HBW		89 – 94

Physical Properties 1)		
Density	[g/cm³]	2,70
Module of elasticity	[GPa]	70
Electrical conductivity	[M/Ω·mm²]	24 – 32
Coeffic. of thermal expansion	[$K^{-1} \cdot 10^{-6}$]	23,4
Thermal conductivity	[W/m·K]	170 – 220
Specific heat capacity	[J/kg ·K]	896

Characteristics:

- ✓ very good anodizing capability
- ✓ high resistance to stress corrosion cracking
- ✓ good corrosion resistance
- ✓ very good weldability
- ✓ good thermal conductivity

Applications:

- ✓ Welded constructions
- ✓ Shipbuilding
- ✓ Cooling technology and vulcanisation
- ✓ Food industry

Processing Characteristics 2)	
Dimensional stability	4 – 5
Machinability	1 – 2
Erodability	1
Weldability (Gas / TIG / MIG / Resistance / EB)	3 / 2 / 1 / 3 / 1
Corrosion resistance (seawater / weather/ stress cracking)	2 / 1 / 1
Use at temperatures (max °C long/short terms) 3)	120 / 160
Anodising (technical / decorative / hard-) 4)	1 / 3 / 1
Polishability	2
Etching	2 – 3
Contact with food (according to EN 602)	yes

Tolerances			
Thickness in[mm]	Flatness [mm/m]	Thickness [mm]	Length & width [mm]
20 - 80	EN 485-3	EN 485-3	EN 485-3
Cuttings			DIN 2769:2023-04

Standard Lieferprogramm		
Plate Dimension [mm]	1.520 x 3.020	in thickness of 20 – 80 mm
Plate Thickness [mm]	20; 25; 30; 40; 60; 80	
Other dimension upon request		

Date: 03.05.2024

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