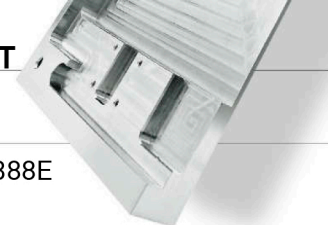


AW-6082 RECTIFIED

EN AW-6082 T651

Rolled plate, precision milled both sides

Reference specification: STC-1388E



BRIEF DESCRIPTION

Precision plates in Alplan® 6082 are milled on both sides and have a very low level of residual stress, thus avoiding excessive deformation during machining.

Thanks to its very good dimensional stability and the elimination of surface milling operations, Alplan® 6082 plates enable to realise significant cost and time savings in machining, when compared to normal rolled plates.

PROCESSING METHODS

Weldability

- TIG/MIG filler metal: excellent (AA 4043, AA 5356)
- by resistance: excellent

Anodisation

- technical: excellent
- decorative: good

* According to their processing conditions, precision plates in Alplan® 6082 feature a fibrous-recrystallized macrostructure which is revealed by anodisation. It is therefore recommended to validate the surface aspect of anodised components through a prototype part.

Machinability excellent

Corrosion behaviour

- excellent in inland atmosphere
- good in marine atmosphere

AVAILABILITY

Alplan® 6082 plates are available in temper T651 (quenched - stretched - artificially aged) in the following dimensions:

Thickness	Dimensions
6.0 - 12.0 mm	1650 x 4020 mm
12.0 - 50.0 mm	2020 x 4020 mm
50.0 - 120.0 mm	1520 x 4020 mm
(other dimensions on request)	

The plates are supplied with a protection film on both sides.

CHEMICAL COMPOSITION (weight %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
0.7	max.	max.	0.40	0.6	max.	max.	max.
1.3	0.50	0.10	1.0	1.2	0.25	0.20	0.10

PHYSICAL PROPERTIES (nominal values)

Density	2.70 g/cm ³
Elastic Modulus	69000 MPa
Lin. thermal expansion coefficient (20°-100°C)	23.4 10 ⁻⁶ K ⁻¹
Thermal conductivity (Temper T651)	150 - 170 W/mK
Electrical conductivity at 20°C (Temper T651)	24 - 28 MS/m

MECHANICAL STRENGTH

Min. guaranteed tensile properties (EN 485-2, temper T651)

Thickness (over ... to ...)	Rm [MPa]	Rp0.2 [MPa]	A50 [%]
= 6.0 mm	310	260	10
6.0 - 12.5 mm	300	255	9
12.5 - 60.0 mm	295	240	8
60.0 - 100.0 mm	295	240	7
100.0 - 120.0 mm	275	240	6

Typical strength for various thicknesses

Thickness (over ... to ...)	Rm [MPa]	Rp0.2 [MPa]	A50 [%]	HB
>/= 6.0 - 25.0 mm	350	305	11	105
25.0 - 60.0 mm	350	310	11	105
60.0 - 120.0 mm	350	310	11	105

TOLERANCES

Thickness	Thickness tolerance
All	± 0.10 mm

Thickness (over ... to ...)	Longitudinal and transverse flatness*
>/= 6.0* - 15.0 mm	max. 0.50 mm/m
15.0 - 120.0 mm	max. 0.35 mm/m
* no guaranteed flatness for thickness < 8.0 mm, indicative value 1.0 mm/m	

Thickness	Roughness Ra
All	max. 0.40 µm

SHAPING YOUR PROJECTS

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