

## Properties

Due to the appropriate homogenization of the EMC cast ingots, AMAG TopPlate® is guaranteed stree-free and therefore offers excellent dimensional stability and strength.

## Availability

Plates in thickness from 8-210mm in different variations:

- AMAG TopPlate® C - cast plates, sawn on both sides
- AMAG TopPlate® CM - cast plates, top and bottom surface machined
- AMAG TopPlate® RM - rolled plate, top and bottom surface machined

## Supplied Forms

- Shate
- Plain sheet
- Plain sheet with a PVC coating on one side
- Stucco sheet
- Stucco sheet with a PVC coating on one side

## Chemical Composition

Pursuant to EN 573-3 (weight %)

| EN AW-5083 | Si   | Fe   | Cu   | Mn   | Mg  | Cr   | Zn   | Ti   | Others max. |
|------------|------|------|------|------|-----|------|------|------|-------------|
| Min        |      |      |      | 0.40 | 4.0 | 0.05 |      |      | Each 0.05   |
| Max        | 0.40 | 0.40 | 0.10 | 1.0  | 4.9 | 0.25 | 0.25 | 0.15 | Total 0.15  |

## Typical Mechanical Properties

|                                       | Direction | R <sub>m</sub> (MPa) | R <sub>po.2</sub> (MPa) | A <sub>5</sub> (%) | HBW |
|---------------------------------------|-----------|----------------------|-------------------------|--------------------|-----|
| AMAG TopPlate® C<br>AMAG TopPlate® CM | 90°       | 240                  | 115                     | 10                 | 70  |
| AMAG TopPlate® RM                     | 90°       | Acc. EN 485-2        |                         |                    |     |

## Physical Properties

| Property                      | Value                      |
|-------------------------------|----------------------------|
| Density                       | 2.66 g/cm <sup>3</sup>     |
| Melting Range                 | 574 - 638 °C               |
| Thermal Expansion Coefficient | 23.8 x 10 <sup>-6</sup> /K |
| Modulus of Elasticity         | ca. 70000 MPa              |
| Thermal Conductivity 25°C     | 117 W/mK                   |
| Electrical Conductivity       | 16-19 MS/m                 |



## Processing Properties

| Processing Properties      |                  |
|----------------------------|------------------|
| Weldability                | Good             |
| Recommended Welding Filler | SG-A14,5MnZr     |
| Machinability              | Very Good        |
| Anodising Ability          | Technically Good |

## Corrosion Properties

In general, the corrosion resistance characteristics of EN Aw-5754 are excellent. However, joins with steel and other metals should be covered with surface protection and/or be electrically insulated, in order to minimise the contact corrosion of the aluminium. Moreover, special corrosion characteristics characteristics are dependent upon local factors.

## Special Properties

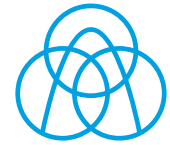
- Excellent dimensional stability due to stress relief (homogenized)
- Closest dimensional tolerances (flatness, thickness)
- Homogeneous structure

## Standards

- EN 485-2, EN 485-3 and EN 573-3

## Areas of Application

- Mechanical engineering (plastics, printing and packaging machinery)
- Automotive industry tools
- Medical instrumenyts
- Housings, container and apparatus construction
- Food production machinery
- formed parts for heating and cooling systems
- Vacuum technology



### Important Notice

Whenever a new application of this alloy is under consideration and this application involves special material properties, it is strongly recommended that the user consult the producer, in order to ensure precise and appropriate material selection.

|                               | AMAG TopPlate® C           | AMAG TopPlate® CM   | AMAG TopPlate® RM   |
|-------------------------------|----------------------------|---|---|
| Thickness (mm)                | 8-210                      | 8-210   | 8-000   |
| Width (mm)                    | 1000, 1250, 1500           | 1000, 1250, 1500  | 1000-1520   |
| Length (mm)                   | 2000-6050                  | 2000-6050   | 2000-6600   |
| Thickness Tolerance (mm)      | +1 / -0                    | +1 / -0.1   | +1 / -0.1   |
| Length Tolerance (mm)         | +4 / -0                    | +4 / -0   | +4 / -0   |
| Width Tolerance (mm)          | +4 / -0                    | +4 / -0   | +4 / -0   |
| Diagonal Difference (mm)      | ≤ 2.4                      | ≤ 2.4   | ≤ 2.4   |
| Flatness (thickness ≤ 15mm/m) | ≤ 0.8                      | ≤ 0.15  | ≤ 0.35  |
| Flatness (thickness ≤ 15mm/m) | ≤ 0.5                      | ≤ 0.15  | ≤ 0.20  |
| Surface                       | Paper interleaved possible | Both sides machined film protection possible on one or both sides | Both sides machined film protection possible on one or both sides |
| Roughness (µm)                |                            | ≤ 0.40  | ≤ 0.40  |
| Edges                         | Sawn                       | Sawn  | Sawn  |
| Marking                       | Adhesive label             | Adhesive label  | Adhesive label  |

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### Important Note

Information given in this data sheet about the condition or usability of materials respectively products are no warranty for their properties, but act as a description.

The information, we give on for advice, comply to the experiences of the manufacturer as well as our own. We cannot give warranty for the results of processing and application of the products.