

# HABA Alu28

Milled rolled aluminium plates  
cut to size

Alu28 is an annealed, naturally hard rolled plate with a precisely milled surface. The plates have an excellent parallelism, are easy to machine and dimensionally stable.

## FINISHES

|                             |  |
|-----------------------------|--|
| Thickness                   | precisely milled $\leq$ Ra0.8 (N6)                             |
| tolerance                   | +/-0.1 mm  |
| protective film             | one-sided  |
| cardboard                   | one-sided  |
| Parallelism                 | $\leq$ 0.1 mm  |
| Evenness                    | $\leq$ 0.2 mm  |
| Length/width                | Ra3.2-6.3 cut with a precision circular saw cut edges deburred |
| HABA standard tolerance     | nominal size +0.8/+0.3 mm                                      |
| Customer-specific tolerance | within a tolerance field of 0.4 mm                             |

We also produce other thicknesses and tolerances on request.

## TECHNICAL SPECIFICATIONS

|   |                                   |
|---|-----------------------------------|
| Tensile strength $R_m$                  | 255-350 (N/mm <sup>2</sup> )      |
| Yield strength $R_{p0.2}$               | $\geq$ 105 (N/mm <sup>2</sup> )   |
| typical values                          | 140-200 (N/mm <sup>2</sup> )      |
| Breaking strain ( $L_o = 5 d_o$ ) $A_5$ | $\geq$ 12 %                       |
| typical values                          | 17-22 %                           |
| Brinell hardness (HBS)                  | $\geq$ 70                         |
| Density                                 | 2.66 kg/dm <sup>3</sup>           |
| E-module                                | $\sim$ 70.000 N/mm <sup>2</sup>   |
| Thermal conductivity coefficient        | 110-140 W/mK                      |
| Thermal expansion coefficient           | $24.2 \times 10^{-6}/K$           |
| Electrical conductivity                 | 16-19 m/ $\Omega$ mm <sup>2</sup> |
| State                                   | H111 (soft)                       |

## INSTRUCTIONS

HABA Alu28 is well suited for machining. Use tools for working aluminium with a cutting speed >2000 m/min. Threads are produced favourably with thread moulders.

## CHEMICAL COMPOSITION

|           |    |               |                             |    |               |
|-----------|----|---------------|-----------------------------|----|---------------|
| Magnesium | Mg | 4.00-4.90 %   | Copper                      | Cu | $\leq$ 0.10 % |
| Manganese | Mn | 0.40-1.00 %   | Titanium                    | Ti | $\leq$ 0.15 % |
| Chromium  | Cr | 0.05-0.25 %   | Zinc                        | Zn | $\leq$ 0.25 % |
| Iron      | Fe | $\leq$ 0.40 % | Other elements together     |    | $\leq$ 0.15 % |
| Silicium  | Si | $\leq$ 0.40 % | Other elements individually |    | $\leq$ 0.05 % |

|                  |                                 |
|------------------|---------------------------------|
| DIN Material no. | 3.3547                          |
| Designation      | EN AW-5083<br>EN AW-AMg4.5Mn0.7 |
| Material code    | AMg4.5Mn                        |
| State            | H111                            |

## MATERIAL IN USE

Plant and apparatus construction  
Vehicle construction  
Jig manufacturing  
Prototype construction  
Mechanical engineering  
Toolmaking and mould construction  
Ship and offshore construction  
Low-temperature technology

## APPLICATIONS

Base plates  
Rotary tables  
Side walls  
Machined and engineered parts of all kinds  
Foam and sample moulds

## PROPERTIES

|                       |            |
|-----------------------|------------|
| strength in the core  |            |
| of thicker plates     | consistent |
| machinability         | good       |
| dimensional stability | good       |
| MIG/TIG weldability   | good       |
| Weatherproofness      | excellent  |
| Seawater resistance   | excellent  |
| tenacity              | high       |
| elongation            | high       |

## SURFACE TREATMENT

|                          |           |
|--------------------------|-----------|
| Decorative anodisation:  | moderate  |
| Protective anodisation:  | excellent |
| Paintwork, coating:      | good      |
| Galvanic coating:        | good      |
| Chemical nickel coating: | excellent |

