HABA Alu50

Milled, high-tensile aluminium rolled plates cut to size

DIN Material no.	3.4345
Designation	EN AW-7022 EN AW-AlZn5Mg3Cu
Material code	AlZnMgCu0.5
State	T6/T651

Alu50 is an artificially aged and additionally low-tension annealed rolled sheet with high tensility and good machinability. The material also has a great hardness and a very good dimensional stability.

FINISHES

Thickness	precisely milled ≤Ra0.8 (N6)
tolerance	+0.2/0 mm
protective film	one-sided
cardboard	one-sided
Parallelism	≤0.1 mm
Evenness	≤0.2 mm
Length/width	Ra3.2-6.3 cut with a precision circular saw
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

Thickness (mm)		<50	50-100	>100
Tensile strength	R_m (N/mm²)	≥450	≥430	≥410
	typical values	~520	~490	~470
Yield strength	$R_{p0.2}$ (N/mm²)	≥370	≥350	≥330
	typical values	~460	~430	~400
Breaking strain	(L_o = 5 d_o)			
	A_5	≥7%	≥5%	≥3%
	typical values	~9%	~8%	~5%
Brinell hardness	(HBS)	≥125	≥110	≥100
Density		2.78 kg/dm³		
E-module		~71.000 N/mm²		
Thermal conductivity coefficient		130-160 W/mK		
Thermal expansion coefficient		23.6 x 10^{-6}/K		
Electrical conductivity		19-23 m/Ω mm²		
State	T6	<10 mm		
	T651	>10 mm		

INSTRUCTIONS

HABA Alu50 is well suited for machining. Use tools for working aluminium with a cutting speed >2000 m/min. Decreasing rigidity in the core of thick plates.

CHEMICAL COMPOSITION

Magnesium	Mg	2.60-3.70 %	Silicium	Si	≤0.50 %
Manganese	Mn	0.10-0.40 %	Copper	Cu	0.50-1.00 %
Chromium	Cr	0.10-0.30 %	Zinc	Zn	4.30-5.20 %
Iron	Fe	≤0.50 %	Ti + Zr		≤0.20 %

MATERIAL IN USE

Special purpose machinery
Jig manufacturing
Prototype construction
Mechanical engineering
Toolmaking
Mould construction
Plant construction

APPLICATIONS

Base plates
Rotary tables
Pattern plates
Machined and engineered parts of all kinds

PROPERTIES

machinability	very good
dimensional stability	good
tensility	high
hardness	high

SURFACE TREATMENT

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

HABA Solutions in plates

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