

HABA ALUMINIUM PLATES OVERVIEW

PRODUCT OVERVIEW

HC5754	Alu35	HC7021
HC5083	Planalu N	G-Alu340
G-Alu25	Planalu G	Alu50
McBasic	Alu6082	Alu7075
Alu28		

MECHANICAL ENGINEERING
VEHICLE CONSTRUCTION
PLANT CONSTRUCTION
APPARATUS CONSTRUCTION
JIG MANUFACTURING
TOOLMAKING



PRODUCT OVERVIEW

ALUMINIUM PLATES

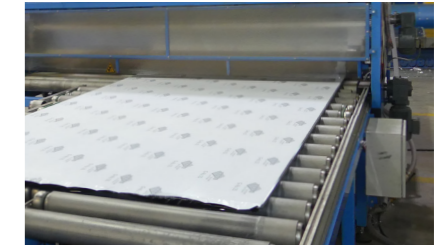
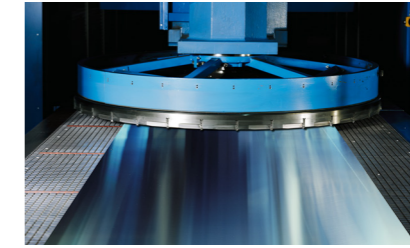


HABA product designation	HC5754	HC5083	G-Alu25 milled	G-Alu25 sawn
Designation	similar EN AW-5754 AlMg3	similar EN AW-5083 AlMg4.5Mn0.7	similar EN AW-5083 AlMg4.5Mn0.7	similar EN AW-5083 AlMg4.5Mn0.7
Material no.	3.3535 (casting plate)	3.3547 (casting plate)	3.3547 (casting plate)	3.3547 (casting plate)
State	homogenise, O3	homogenise, O3	homogenise, O3	homogenise, O3
Surface	finely milled	finely milled	finely milled	cut by band saw
HABA standard tolerance				
Surface tolerance	Ra0.8 (N6)	Ra0.8 (N6)	Ra0.8 (N6)	Ra25 (N12)
Thickness tolerance (mm)	+/-0.05	+/-0.05	+/-0.05	+1/0
Parallelism (mm)	≤0.05	≤0.05	≤0.05	0.3
Evenness (mm)	≤0.2	≤0.2	≤0.2	0.3
Length and width tolerance (mm)	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3
Customer-specific tolerance (mm)	within a tolerance field of 0.4	within a tolerance field of 0.4	within a tolerance field of 0.4	within a tolerance field of 0.4
Mechanical properties				
Machinability	very good	very good	very good	very good
Dimensional stability	very good	very good	very good	very good
Tensile strength R_m (N / mm ²)	190-230	250 - 300	≥250	≥250
Elastic limit $R_{p0.2}$ (N / mm ²)	≥80	110-135	≥115	≥115
Breaking strain A_g	≥12 %	>12 %	6-10 %	6-10 %
Brinell hardness (HBS)	~55	70 - 75	≥70	≥70
Weldability (WIG, MIG)	good	good	good	good
Behaviour by anodisation				
Decorative anodising	very good	moderate	moderate	moderate
Protective anodising	very good	very good	very good	very good
Use in contact with food	yes	yes	yes	yes
Resistance				
Weatherproofness	very good	very good	very good	very good
Seawater resistance	very good	very good	very good	very good
Chemical composition				
Magnesium	Mg 2.6-3.6 %	4.0-4.9 %	4.0-4.9 %	4.0-4.9 %
Manganese	Mn ≤0.50 %	0.4-1.0 %	0.4-1.0 %	0.4-1.0 %
Chromium	Cr ≤0.30 %	0.05-0.25 %	0.05-0.25 %	0.05-0.25 %
Iron	Fe ≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %
Silicium	Si ≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %
Copper	Cu ≤0.10 %	≤0.10 %	≤0.10 %	≤0.10 %
Titanium	Ti ≤0.15 %	≤0.15 %	≤0.15 %	≤0.15 %
Zinc	Zn ≤0.20 %	≤0.25 %	≤0.25 %	≤0.25 %
Other elements together / individually	≤0.15 % / 0.05 %	≤0.15 % / 0.05 %	≤0.15 % / 0.05 %	≤0.15 % / 0.05 %
Comments / comparisons	HC5754 is a naturally hardened aluminium casting plate which fulfils the most demanding machinability and dimensional stability requirements. The special manufacturing process is carried out according to strict HABA factory standards.	HC5083 is a naturally hard horizontally casted aluminium plate that meets the highest requirements for machinability and dimensional stability. The special manufacturing process is carried out according to strict HABA factory standards. The high microstructure quality ensures good results in surface finishing.	G-Alu25 is a naturally hardened aluminium casting plate which fulfils the most demanding machinability and dimensional stability requirements. The special casting process is the guarantee for the homogeneous joint and the vacuum tightness.	G-Alu25 is a naturally hardened aluminium casting plate which fulfils the most demanding machinability and dimensional stability requirements. The special casting process is the guarantee for the homogeneous joint and the vacuum tightness.

McBasic	Alu28	Alu35	Planalu N
similar EN AW-5083 AlMg4.5Mn0.7	EN AW-5083 EN AW-AlMg4.5Mn0.7	EN AW-5083 EN AW-AlMg4.5Mn0.7	EN AW-5083 EN AW-AlMg4.5Mn0.7
3.3547 (casting plate)	3.3547	3.3547	3.3547
homogenise, O3	H111	H111 / low-tension annealed	H111
finely milled	finely milled	grinded	as-rolled
Surface tolerance			
Ra0.8 (N6)	Ra0.8 (N6)	Ra1.6 (N7)	as-rolled
+/-0.1	+/-0.1	+0.2/0	EN 485-3/4
-	≤0.1	≤0.1	≤0.2/100
≤0.4	≤0.2	≤0.2	EN 485-3/4
+1/0	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3
-	within a tolerance field of 0.4	within a tolerance field of 0.4	within a tolerance field of 0.4
Machinability			
good	good	good	good
good	good	very good	good
Tensile strength			
≥250	255-350	255-350	255-350
≥115	≥105	≥105	≥105
6-10 %	≥12 %	≥12 %	≥12 %
≥70	≥70	≥70	≥70
Weldability			
good	good	good	good
Behaviour by anodisation			
moderate	moderate	moderate	moderate
very good	very good	very good	very good
yes	yes	yes	yes
Resistance			
very good	very good	very good	very good
very good	very good	very good	very good
Chemical composition			
4.0-4.9 %	4.0-4.9 %	4.0-4.9 %	4.0-4.9 %
0.4-1.0 %	0.4-1.0 %	0.4-1.0 %	0.4-1.0 %
0.05-0.25 %	0.05-0.25 %	0.05-0.25 %	0.05-0.25 %
≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %
≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %
≤0.10 %	≤0.10 %	≤0.10 %	≤0.10 %
≤0.15 %	≤0.15 %	≤0.15 %	≤0.15 %
≤0.25 %	≤0.25 %	≤0.25 %	≤0.25 %
≤0.15 % / 0.05 %	≤0.15 % / 0.05 %	≤0.15 % / 0.05 %	≤0.15 % / 0.05 %
McBasic is a naturally hardened casting plate with good machinability and dimensional stability. Ideally suited for price-sensitive products in larger quantities.	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.	Alu35 is a low-tension annealed rolled plate with a grinded surface. The plates have excellent parallelism, are easy to machine and extremely dimensionally stable.	Planalu is a naturally hard rolled plate with good machinability and good dimensional stability. It is easy to weld, is extremely corrosion-resistant and suitable for metallic coatings.

PRODUCT OVERVIEW

ALUMINIUM PLATES

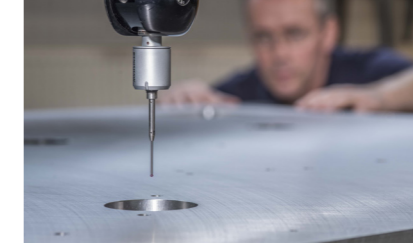


HABA product designation	Planalu G	Alu6082 milled	Alu6082 as-rolled	HC7021
Designation	EN AW-5083 EN AW-AIMg4.5Mn0.7	EN AW-6082 EN AW-AISi1MgMn	EN AW-6082 EN AW-AISi1MgMn	EN AW-7021 AlZn5.5Mg1.5
Material no.	3.3547	3.2315	3.2315	-
State	H111 / low-tension annealed	T6/T651	T6/T651	T73
Surface	as-rolled	finely milled	as-rolled	finely milled
HABA standard tolerance				
Surface tolerance	as-rolled	Ra0.8 (N6)	as-rolled	Ra0.8 (N6)
Thickness tolerance (mm)	EN 485-3/4	+/-0.1	EN 485-3/4	+/-0.1 mm
Parallelism (mm)	≤0.2/100	≤0.05	≤0.2/100	≤0.05
Evenness (mm)	EN 485-3/4	≤0.2	≤0.5	≤0.2
Length and width tolerance (mm)	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3
Customer-specific tolerance (mm)	within a tolerance field of 0.4	within a tolerance field of 0.4	within a tolerance field of 0.4	within a tolerance field of 0.4
Mechanical properties				
Machinability	good	good	good	very good
Dimensional stability	very good	medium-good	medium-good	very good
Tensile strength R_m (N / mm ²)	255-350	275-350	275-350	340-390
Elastic limit $R_{p0.2}$ (N / mm ²)	≥105	240-310	240-310	280-340
Breaking strain A_g	≥12 %	6-10 %	6-10 %	>3 %
Brinell hardness (HBS)	≥70	84-104	84-104	≥125
Weldability (WIG, MIG)	good	very good	very good	very good
Behaviour by anodisation				
Decorative anodising	moderate	good	good	moderate
Protective anodising	very good	very good	very good	good
Use in contact with food	yes	yes	yes	no
Resistance				
Weatherproofness	very good	very good	very good	good
Seawater resistance	very good	very good	very good	good
Chemical composition				
Magnesium	Mg 4.0-4.9 %	0.6-1.2 %	0.6-1.2 %	1.2-1.8 %
Manganese	Mn 0.4-1.0 %	0.4-1.0 %	0.4-1.0 %	≤0.10 %
Chromium	Cr 0.05-0.25 %	≤0.25 %	≤0.25 %	≤0.05 %
Iron	Fe ≤0.40 %	≤0.5 %	≤0.5 %	≤0.40 %
Silicium	Si ≤0.40 %	0.7-1.3 %	0.7-1.3 %	≤0.25 %
Cooper	Cu ≤0.10 %	≤0.1 %	≤0.1 %	≤0.25 %
Titanium	Ti ≤0.15 %	≤0.1 %	≤0.1 %	≤0.10 %
Zinc	Zn ≤0.25 %	≤0.2 %	≤0.2 %	≤5.0-6.0 %
Other elements together / individually	≤0.15 % / 0.05 %	≤0.15 % / 0.15 %	≤0.15 % / 0.15 %	≤0.15 % / 0.05 %
Comments / comparisons				
	Planalu is a naturally hard rolled plate with good machinability and good dimensional stability. It is easy to weld, is extremely corrosion-resistant and suitable for metallic coatings. Planalu G is additionally low-tension annealed.	Alu6082 is an artificially aged rolled plate with a precisely milled or rolled surface. The material is very easy to machine and has medium to good dimensional stability. It has outstanding corrosion resistance against weather and seawater.	Alu6082 is an artificially aged rolled plate with a precisely milled or rolled surface. The material is very easy to machine and has medium to good dimensional stability. It has outstanding corrosion resistance against weather and seawater.	HC7021 is a age-hardened, horizontally cast aluminium plate that meets the most stringent requirements for strength and machining properties. The special manufacturing process is according to strict HABA factory standards. Temper T73 ensures the best corrosion resistance.

G-Alu340	Alu50	Alu7075 milled	Alu7075 as-rolled
EN AW-7021 AlZn5.5Mg1.5	EN AW-7022 EN AW-AlZn5Mg3Cu	EN AW-7075 EN AW-AlZnMgCu1.5	EN AW-7075 EN AW-AlZnMgCu1.5
-	3.4345	3.4365	3.4365
casting plate, T6	T6/T651	T6/T651	T6/T651
finely milled	milled	milled	as-rolled
HABA standard tolerance			
Surface tolerance	Ra0.8 (N6)	Ra0.8 (N6)	as-rolled
Thickness tolerance (mm)	+/-0.1	+0.2/0	EN 485-3/4
Parallelism (mm)	≤0.05	≤0.1	≤0.2/100
Evenness (mm)	≤0.2	≤0.2	≤0.5
Length and width tolerance (mm)	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3
Customer-specific tolerance (mm)	within a tolerance field of 0.4	within a tolerance field of 0.4	within a tolerance field of 0.4
Mechanical properties			
Machinability	very good	very good	very good
Dimensional stability	very good	good	moderate
	<50 50-100 >100	<50 50-100 >100	<50 50-100 >100
≥340	≥450 ≥430 ≥410	≥500 ≥480-500 ≥400	≥500 ≥480-500 ≥400
≥300	≥370 ≥350 ≥330	≥450 ≥390-430 ≥280	≥450 ≥390-430 ≥280
≥3 %	≥7 % ≥5 % ≥3 %	3-8 % ≥2 % ≥2 %	3-8 % ≥2 % ≥2 %
≥110	≥125 ≥110 ≥100	≥140 ≥130 ≥120	≥140 ≥130 ≥120
very good	moderate	moderate	moderate
Behaviour by anodisation			
Decorative anodising	moderate	moderate	bad or unsuitable
Protective anodising	good	good	good
Use in contact with food	no	no	no
Resistance			
Weatherproofness	good	moderate	moderate
Seawater resistance	good	moderate	moderate
Chemical composition			
Magnesium	2.6-3.7 %	2.1-2.9 %	2.1-2.9 %
Manganese	0.1-0.4 %	≤0.3 %	≤0.3 %
Chromium	0.1-0.3 %	0.18-0.28 %	0.18-0.28 %
Iron	≤0.5 %	≤0.5 %	≤0.5 %
Silicium	≤0.5 %	≤0.4 %	≤0.4 %
Cooper	0.5-1.0 %	1.2-2.0 %	1.2-2.0 %
Titanium	≤0.2 % (Ti+Zr)	≤0.2 % (Ti+Zr ≤0.25 %)	≤0.2 % (Ti+Zr ≤0.25 %)
Zinc	4.3-5.2 %	5.1-6.1 %	5.1-6.1 %
Other elements together / individually	≤0.15 % / 0.05 %	≤0.15 % / ≤0.15 %	≤0.15 % / ≤0.15 %
Comments / comparisons			
G-Alu340 is an aluminium casting plate with significantly higher dimensional stability than naturally hardened casting plates. We achieve the persistent equal strength with a multi-stage process of heat-treating and natural aging. The material stands out for its excellent machinability and great stability.	Alu50 is an artificially aged and additionally low-tension annealed rolled plate with high tensility and good machinability. The material also has a great hardness and a very good dimensional stability.	Alu7075 is an artificially aged rolled plate with very high tensility and hardness. The material can be easily machined. Slight bending is possible.	Alu7075 is an artificially aged rolled plate with very high tensility and hardness. The material can be easily machined. Slight bending is possible.

HABA STORAGE FORMATS

ALUMINIUM PLATES



	HC5754	HC5083	G-Alu25		McBasic	Alu28	Alu35
Standard format in mm	1520 x 3020	1520 x 3020	1560 x 3000		2160x 4000	1520 x 3020	1003 x 3020
Max format in mm	1520 x 4030	1520 x 4030	2160 x 4000			2010 x 3020	2010 x 3020
Thickness in mm	finely milled	finely milled	finely milled	cut by band saw	finely milled	finely milled	grinded
3		•	•				
4		•	•				
5	•	•	•			•	•
6	•	•	•			•	•
7		•	•				
8	•	•	•			•	•
9		•	•				
10	•	•	•			•	•
11		•	•				
12	•	•	•			•	•
13			•				
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16			•				
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20	•	•	•		○	•	•
21			•	+1/0 •			
22	•		•				
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25	•	•	•		○	•	•
26			•	+1/0 •			
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28	•		•				
29			•				
30	•	•	30 • / 33 •	31 +1/0 •	○	•	•
35	•	•	•		○	•	•
37	•		38 •	36 +1/0 •			
40	•	•	•	41 +1/0 •	○	•	•
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60	•	•	•	61 +1/0 •	○	•	•
70	•		•	71 +1/0 •			
80	•		•	81 +1/0 •			•
90	•		•	91 +1/0 •			
100	•		•	101 +1/0 •			
110			•	111 +1/0 •			
120			•	121 +1/0 •			
130			•				
140			•				
150			•				
160							

• 1-3 days delivery
○ 5 days delivery

On request we can also produce special thicknesses and special tolerances
Subject to changes in stocks

	Planalu N	Planalu G	Alu6082		HC7021	G-Alu340	Alu50	Alu7075	
	1520 x 3020	1520 x 3020	1520 x 3020		1520 x 3020 1520 x 4030	1545 x 3040	1500 x 3000	1520 x 3020	
	as-rolled	as-rolled	finely milled	as-rolled	finely milled	finely milled	finely milled	finely milled	as-rolled
3									
4									
5	•	•		•					
6	•	•	•	•	•	•	•		
7									
8	•	•	•	•	•	•	•		
9									
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70									
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90	•		•	•	•	•	•	•	•
100	•		•	•	•	•	•	•	•
110									
120									
130									
140									
150									

• 1-3 days delivery
○ 5 days delivery

On request we can also produce special thicknesses and special tolerances
Subject to changes in stocks

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