

HABA ALUMINIUM PLATES OVERVIEW

PRODUCT OVERVIEW

G-AlMg3	Planalu N	Alu6082
G-Alu25	Planalu G	G-Alu340
G-Alu25 eloxtop	Alu28	Alu50
McBasic	Alu35	Alu7075

MECHANICAL ENGINEERING
VEHICLE CONSTRUCTION
PLANT CONSTRUCTION
APPARATUS CONSTRUCTION
JIG MANUFACTURING
TOOLMAKING



PRODUCT OVERVIEW

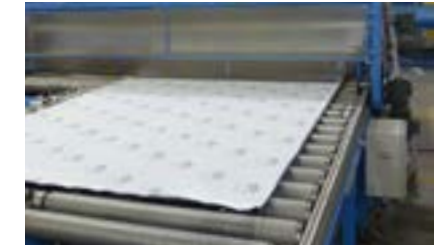
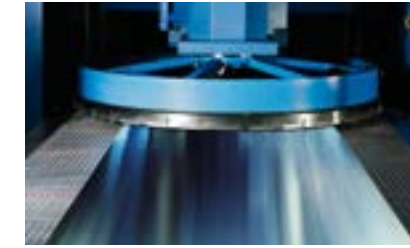
ALUMINIUM PLATES



HABA product designation	G-AlMg3 milled	G-Alu25 milled	G-Alu25 sawn	G-Alu25 eloxtop	McBasic	Alu28	Alu35	Planalu N	Planalu G
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	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	EN AW-5083 EN AW-AlMg4.5Mn0.7
Material no.	3.3535 (casting plate)	3.3547 (casting plate)	3.3547 (casting plate)	3.3547 (casting plate)	3.3547 (casting plate)	3.3547	3.3547	3.3547	3.3547
State	homogenise, O3	homogenise, O3	homogenise, O3	homogenise, O3	homogenise, O3	H111	H111 / low-tension annealed	H111	H111 / low-tension annealed
Surface	finely milled	finely milled	cut by band saw	finely milled	finely milled	finely milled	grinded	as-rolled	as-rolled
HABA standard tolerance									
Surface tolerance	Ra0.8 (N6)	Ra0.8 (N6)	Ra25 (N12)	Ra0.8 (N6)	Ra0.8 (N6)	Ra0.8 (N6)	Ra1.6 (N7)	as-rolled	as-rolled
Thickness tolerance (mm)	+/-0.1	+/-0.05	+1/0	+/-0.05	+/-0.1	+/-0.1	+0.2/0	EN 485-3/4	EN 485-3/4
Parallelism (mm)	≤0.1	≤0.05	0.3	≤0.05	-	≤0.1	≤0.1	≤0.2/100	≤0.2/100
Evenness (mm)	≤0.2	≤0.2	0.3	≤0.2	≤0.4	≤0.2	≤0.2	EN 485-3/4	EN 485-3/4
Length and width tolerance (mm)	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3	+1/0	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3
Customer-specific tolerance	within a tolerance field of 0.4 mm	within a tolerance field of 0.4 mm	within a tolerance field of 0.4 mm	within a tolerance field of 0.4 mm	-	within a tolerance field of 0.4 mm	within a tolerance field of 0.4 mm	within a tolerance field of 0.4 mm	within a tolerance field of 0.4 mm
Mechanical properties									
Machinability	very good	very good	very good	very good	good	good	good	good	good
Dimensional stability	very good	very good	very good	very good	good	good	very good	good	very good
Tensile strength R_m (N / mm ²)	190-230	≥250	≥250	250 - 290	≥250	255-350	255-350	255-350	255-350
Elastic limit $R_{p0.2}$ (N / mm ²)	≥80	≥115	≥115	115-135	≥115	≥105	≥105	≥105	≥105
Breaking strain A_5	6-10 %	6-10 %	6-10 %	>12 %	6-10 %	≥12 %	≥12 %	≥12 %	≥12 %
Brinell hardness (HBS)	~50	≥70	≥70	70 - 75	≥70	≥70	≥70	≥70	≥70
Weldability (WIG, MIG)	good	good	good	good	good	good	good	good	good
Behaviour by anodisation									
Decorative anodising	very good	moderate	moderate	good	moderate	moderate	moderate	moderate	moderate
Protective anodising	very good	very good	very good	very good	very good	very good	very good	very good	very good
Use in contact with food	yes	yes	yes	yes	yes	yes	yes	yes	yes
Resistance									
Weatherproofness	very good	very good	very good	very good	very good	very good	very good	very good	very good
Seawater resistance	very good	very good	very good	very good	very good	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 %	4.0-4.9 %	4.0-4.9 %	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 %	0.4-1.0 %	0.4-1.0 %	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 %	0.05-0.25 %	0.05-0.25 %	0.05-0.25 %	0.05-0.25 %	0.05-0.25 %
Iron	Fe ≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %
Silicium	Si ≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %	≤0.40 %
Cooper	Cu ≤0.10 %	≤0.10 %	≤0.10 %	≤0.10 %	≤0.10 %	≤0.10 %	≤0.10 %	≤0.10 %	≤0.10 %
Titanium	Ti ≤0.15 %	≤0.15 %	≤0.15 %	≤0.15 %	≤0.15 %	≤0.15 %	≤0.15 %	≤0.15 %	≤0.15 %
Zinc	Zn ≤0.20 %	≤0.25 %	≤0.25 %	≤0.25 %	≤0.25 %	≤0.25 %	≤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 %	≤0.15 % / 0.05 %	≤0.15 % / 0.05 %	≤0.15 % / 0.05 %	≤0.15 % / 0.05 %	≤0.15 % / 0.05 %
Comments / comparisons	G-AlMg3 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. These standards apply to all process steps and are a guarantee for the homogeneous structure. Together with the narrow alloy setting, this unique character gives our evolution the excellent technological properties.	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.	G-Alu25 eloxtop is a naturally hard cast 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. These standards apply to all process steps and are a guarantee for the excellent properties, homogeneous microstructure as well as gas and vacuum tightness. The high microstructure quality ensures good results in surface finishing.	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.	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.

PRODUCT OVERVIEW

ALUMINIUM PLATES



HABA product designation	Alu6082 milled	Alu6082 as-rolled	G-Alu340 milled
Designation	EN AW-6082 EN AW-AISI1MgMn	EN AW-6082 EN AW-AISI1MgMn	EN AW-7021 AlZn5.5Mg1.5
Material no.	3.2315	3.2315	-
State	T6/T651	T6/T651	casting plate, T6
Surface	finely milled	as-rolled	finely milled
HABA standard tolerance			
Surface tolerance	Ra0.8 (N6)	as-rolled	Ra0.8 (N6)
Thickness tolerance (mm)	+/-0.1	EN 485-3/4	+/-0.1
Parallelism (mm)	≤0.05	≤0.2/100	≤0.05
Evenness (mm)	≤0.2	≤0.5	≤0.2
Length and width tolerance (mm)	+0.8/+0.3	+0.8/+0.3	+0.8/+0.3
Customer-specific tolerance	within a tolerance field of 0.4mm	within a tolerance field of 0.4mm	within a tolerance field of 0.4mm
Mechanical properties			
Machinability	good	good	very good
Dimensional stability	medium-good	medium-good	very good
Tensile strength R_m (N / mm ²)	275-350	275-350	≥340
Elastic limit $R_{p0.2}$ (N / mm ²)	240-310	240-310	≥300
Breaking strain A_5	6-10 %	6-10 %	≥3 %
Brinell hardness (HBS)	84-104	84-104	≥110
Weldability (WIG, MIG)	very good	very good	very good
Behaviour by anodisation			
Decorative anodising	good	good	good
Protective anodising	very good	very good	good
Use in contact with food	yes	yes	no
Resistance			
Weatherproofness	very good	very good	good
Seawater resistance	very good	very good	good
Chemical composition			
Magnesium	Mg 0.6-1.2 %	0.6-1.2 %	1.2-1.8 %
Manganese	Mn 0.4-1.0 %	0.4-1.0 %	0.1 %
Chromium	Cr ≤0.25 %	≤0.25 %	0.05 %
Iron	Fe ≤0.5 %	≤0.5 %	0.4 %
Silicium	Si 0.7-1.3 %	0.7-1.3 %	0.25 %
Cooper	Cu ≤0.1 %	≤0.1 %	0.25 %
Titanium	Ti ≤0.1 %	≤0.1 %	0.1 %
Zinc	Zn ≤0.2 %	≤0.2 %	5.0-6.0 %
Other elements together / individually	≤0.15 % / 0.15 %	≤0.15 % / 0.15 %	≤0.15 % / 0.05 %
Comments / comparisons	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.	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	Alu7075 milled	Alu7075 as-rolled
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
T6/T651	T6/T651	T6/T651
milled	milled	as-rolled
HABA standard tolerance		
Surface tolerance	Ra0.8 (N6)	as-rolled
Thickness tolerance (mm)	+/-0.1	EN 485-3/4
Parallelism (mm)	≤0.1	≤0.2/100
Evenness (mm)	≤0.2	≤0.5
Length and width tolerance (mm)	+0.8/+0.3	+0.8/+0.3
Customer-specific tolerance	within a tolerance field of 0.4mm	within a tolerance field of 0.4mm
Mechanical properties		
Machinability	very good	very good
Dimensional stability	good	moderate
	<50 50-100 >100	<50 50-100 >100
	≥450 ≥430 ≥410	≥500 ≥480-500 ≥400
	≥370 ≥350 ≥330	≥450 ≥390-430 ≥280
	≥7 % ≥5 % ≥3 %	3-8 % ≥2 % ≥2 %
	≥125 ≥110 ≥100	≥140 ≥130 ≥120
	moderate	moderate
	moderate	bad or unsuitable
	good	good
	no	no
	moderate	moderate
	moderate	moderate
	2.6-3.7 %	2.1-2.9 %
	0.1-0.4 %	≤0.3 %
	0.1-0.3 %	0.18-0.28 %
	≤0.5 %	≤0.5 %
	≤0.5 %	≤0.4 %
	0.5-1.0 %	1.2-2.0 %
	≤0.2 % (Ti+Zr)	≤0.2 % (Ti+Zr ≤0.25 %)
	4.3-5.2 %	5.1-6.1 %
	≤0.15 % / ≤0.15 %	≤0.15 % / ≤0.15 %
	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



	G-AlMg3	G-Alu25		G-Alu25 eloxtop	McBasic	Alu28	Alu35
Standard format in mm	1520 x 3020	1560 x 3000		1520 x 3020	2160x 4000	1520 x 3020	1003 x 3020
Max format in mm	1520 x 4030	2160 x 4000		1520 x 4030		2010 x 3020	2010 x 3020
Thickness in mm	finely milled	finely milled	cut by band saw	finely milled	finely milled	finely milled	grinded
3		•		•			
4		•		•			
5	•	•		•		•	•
6	•	•		•		•	•
7		•		•			
8	•	•		•		•	•
9		•		•			
10	•	•		•		•	•
11		•		•			
12	•	•		•		•	•
13		•		•			
14		•		•			
15	•	•		•	○	•	•
16		•		•			
17		•		•			
18		•		•			
19		•		•			
20	•	•		•	○	•	•
21		•	+1/0 •	•			
22	•	•		•			
23		•		•			
24		•		•			
25	•	•		•	○	•	•
26		•	+1/0 •	•			
27	•	•		•			
28	•	•		•			
29		•		•			
30	•	30 • / 33 •	31 +1/0 •	•	○	•	•
35	•	•		•	○	•	•
37	•	38 •	36 +1/0 •	•			
40	•	•	41 +1/0 •	•	○	•	•
45		•		•		•	•
46			•	•			
50	•	•	51 +1/0 •	•	○	•	•
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		G-Alu340	Alu50	Alu7075	Alu7075
Standard format in mm	1520 x 3020	1520 x 3020	1520 x 3020		1545 x 3040	1500 x 3000	1520 x 3020	1520 x 3020
Max format in mm								
Thickness in mm	as-rolled	as-rolled	finely milled	as-rolled	finely milled	finely milled	finely milled	as-rolled
3								
4								
5	•	•		•				
6	•	•	•	•	•	•		
7								
8	•	•	•	•	•	•		
9								
10	•	•	•	•	•	•	•	•
11								
12	•	•	•	•	•	•	•	•
13								
14								
15	•	•	•	•	•	•	•	•
16								
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19								
20	•	•	•	•	•	•	•	•
21								
22								
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24								
25	•	•	•	•	•	•	•	•
26								
27								
28								
29								
30	•	•	•	•	•	•	•	•
35	•	•	•	•	•	•	•	•
37								
40	•	•	•	•	•	•	•	•
45	•	•		•	•	•	•	•
46								
50	•	•	•	•	•	•	•	•
60	•	•	•	•	•	•	•	•
70				•	•	•	•	•
80				•	•	•	•	•
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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in plates*