

## Al Mg3

## PERALUMAN 300

### CHEMICAL COMPOSITION :

Si	0.40%
Fe	0.40%
Cu	0.10%
<b>Mn</b>	<b>0.10 - 0.60%</b>
<b>Mg</b>	<b>2.6 - 3.40%</b>
<b>Cr</b>	<b>0.10 - 0.60%</b>
Zn	0.20%
Ti	0.15%
Others	0.05%

### PHYSICAL PROPERTIES :

Density 20° C	2.67	Kg/dm <sup>3</sup>
Melting point	600-645	°C
Modulus of elasticity, longitudinal	70	GPa
Thermal Conductivity	130-140	W/M . K
Electrical Conductivity	≥ 19	M/Ω mm <sup>2</sup>
Electrical resistivity	≤ 0.053	Ω mm <sup>2</sup> /M
Coefficient of linear expansion from 20 up to 300°C	23.8 x 10 <sup>-6</sup>	K <sup>-1</sup>
IACS (International Annealed Copper Standard)	33	%

### WORKABILITY AND CORROSION :

Coldworking	Very good
Hotworking	Very good (under gas protection)
Machining	Poor
Soldering, brazing	Very good (under gas protection)
Resistance welding	Good
Polishing	Medium
Annealing temperature	350-450°C
Stress relieving heat treatment temperature	~150°C
Corrosion in normal atmosphere	Very good
Corrosion in industrial and marine atmosphere	Very good

### MAIN APPLICATIONS :

Clock and watch components, low-inertia components parts for anodising  
High corrosion resistance parts, non magnetic  
high electrical and thermal conductivity

### MAIN SPECIFICATIONS :

Medium mechanical strength, included annealed temper,  
High corrosion resistance especially versus salt water  
high ductility, good welding performances

### QUALITY OF EDGES :

Slit edges

### ALLOY DENOMINATIONS :

MATERIAL N° EN :	AW-5754
WN/MATERIAL N° DIN :	3.3535
ROBERT LAMINAGE :	830
EN :	AlMg3
DIN :	AlMg3
AFNOR :	A - G3M (5754)
UNS* :	5754

*\*Unified Numbering System (USA)*

2.67	Kg/dm <sup>3</sup>
600-645	°C
70	GPa
130-140	W/M . K
≥ 19	M/Ω mm <sup>2</sup>
≤ 0.053	Ω mm <sup>2</sup> /M
23.8 x 10 <sup>-6</sup>	K <sup>-1</sup>
33	%

Very good
Very good (under gas protection)
Poor
Very good (under gas protection)
Good
Medium
350-450°C
~150°C
Very good
Very good

### CONDITIONING :

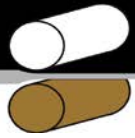
- In coils
- Cut to length, from 0.5 up to 3 m

### AVAILABLE SIZES :

Widths	from 2 up to 350mm
Thickness	from 0.01up to 2.5mm

### TOLERANCES :

Depending on product



**MECHANICAL PROPERTIES :**

**Al Mg3**

**EN NORM 485-2 (AlMg3)**

TEMPER	THICKNESS		Rm (MPa)		Rp 0.2 min (Mpa)	ELONGATION		HBS* HARDNESS
			min	max		0.10 up to 2.5 mm A50 % min	above 2.5 mm A100 % min	
O/H111	0.2	0.5	190	240	80	12	-	52
	0.5	1.5	190	240	80	14	-	52
	1.5	3.0	190	240	80	16	-	52
H12	0.2	0.5	220	270	170	4	-	66
	0.5	1.5	220	270	170	5	-	66
	1.5	3.0	220	270	170	6	-	66
H14	0.2	0.5	240	280	190	3	-	72
	0.5	1.5	240	280	190	3	-	72
	1.5	3.0	240	280	190	4	-	72
H16	0.2	0.5	265	305	220	2	-	80
	0.5	1.5	265	305	220	3	-	80
	1.5	3.0	265	305	220	3	-	80
H18	0.2	0.5	290	-	250	1	-	88
	0.5	1.5	290	-	250	2	-	88
	1.5	3.0	290	-	250	2	-	88
H22/H32	0.2	0.5	220	270	130	7	-	63
	0.5	1.5	220	270	130	8	-	63
	1.5	3.0	220	270	130	10	-	63
H24/H34	0.2	0.5	240	280	160	6	-	70
	0.5	1.5	240	280	160	6	-	70
	1.5	3.0	240	280	160	7	-	70
H26/H36	0.2	0.5	265	305	190	4	-	78
	0.5	1.5	265	305	190	4	-	78
	1.5	3.0	265	305	190	5	-	78
H28/H38	0.2	0.5	290	-	230	3	-	87
	0.5	1.5	290	-	230	3	-	87
	1.5	3.0	290	-	230	4	-	87

\*For information only

**DIN NORM 1745**

TEMPER	THICKNESS		Rm (MPa)		Rp 0.2 min (Mpa)	ELONGATION		
	μ min	max	min	max		0.10 up to 2.5 mm A50 % min	above 2.5 mm A100 % min	
W19	70	179	190	230	-	15	-	annealed
	180	350	190	230	80	-	20	
F24	180	350	240	280	190	-	4	coldworked
G24	70	179	240	280	-	5	-	heat treated
	180	350	240	280	160	-	8	
F27	180	350	265	305	215	-	3	coldworked
G27	180	350	265	305	190	-	6	heat treated
F29	180	350	290	330	250	-	2	coldworked
G29	180	350	290	330	220	-	5	heat treated
F32	70	179	320	-	-	2	-	coldworked
	180	350	320	-	280	-	2	

\*For information only

**AFNOR NORM NF A 50-451**

TEMPER	THICKNESS e millimetres	Rm (MPa)		Rp 0.2 min (Mpa)	ELONGATION	Metallurgical State
		min	max		0.10 up to 2.5 mm A65 % min	
annealed	0.4 ≤ e ≤ 1.6	190	240	8	20	O (H11)
	1.6 < e ≤ 6	190	240	8	18	O (H11)
1/4 hard	0.4 ≤ e ≤ 1.6	220	270	13	11	H22 - H32
	1.6 < e ≤ 3.2	220	270	13	11	H22
1/2 hard	0.4 ≤ e ≤ 3.2	240	290	16	8	H24 - H34
3/4 hard	0.4 ≤ e ≤ 3.2	260	310	19	7	H26 - H36
skinpass	6 ≤ e ≤ 80	200	-	9	15	H112