



## EXTRUSION ALUMINIUM ALLOY

EN AW-6060

The alloy type EN AW-6060 is the most popular alloy on the European market, thanks to its high deformation speed under heat.

It is used to produce sections, even with complex cross sections, that include many hollows and groves, so that the design of the extruded piece is as near as possible to the finished article and to reduce intermediary processes.

### Physical characteristics

Volume mass :	2,70	g / cm <sup>3</sup>	Thermal conductivity at 20°C	in state O:	2,09	W / cm °K
Lower melting point:	605	°C		in state T6:	1,75	W / cm °K
Specific heat between 0° and 100°C:	890	J/Kg °K	Linear thermal expansion coefficient	- 20°C - 100°C:	23,0 · 10 <sup>-6</sup>	1 / °K
Linear modulus of elasticity E:	69000	N / mm <sup>2</sup>		- 20°C - 200°C:	24,0 · 10 <sup>-6</sup>	1 / °K
Tangential modulus of elasticity G:	26000	N / mm <sup>2</sup>		- 20°C - 300°C:	25,0 · 10 <sup>-6</sup>	1 / °K
			Electrical resistivity at 20°C	in state O:	3,14	μΩ · cm
				in state T6:	3,25	μΩ · cm

### Chemical composition according to European Standard EN 573.3

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others		Al
									Each	Total	
<b>EN AW-6060</b>	0,30 ÷ 0,60	0,10 ÷ 0,30	0,10 max	0,10 max	0,35 ÷ 0,60	0,05 max	0,15 max	0,10 max	0,05 max	0,15 max	rest

### Minimum mechanical properties, according to European Standard EN 755.2

Types of profile	(1) Temper state	Diameter D [mm] for rods or thickness TH [mm] for bars or thickness of walls and for sections		Tensile strength Rm [MPa]		Limit elasticity load R <sub>p0.2</sub> [MPa]		Elongation	
				min	max	min	max	A % min	A <sub>50mm</sub> % min
<b>Full bars</b>	T4 (*)	D ≤ 150	S ≤ 150	120	-	60	-	16	14
	T5	D ≤ 150	S ≤ 150	160	-	120	-	8	6
	T6 (*)	D ≤ 150	S ≤ 150	190	-	150	-	8	6
	T64 (*)	D ≤ 50	S ≤ 50	180	-	120	-	12	10
	T66 (*)	D ≤ 150	S ≤ 150	215	-	160	-	8	6
<b>Extruded pipe</b>	T4 (*)	e ≤ 15		120	-	60	-	16	14
	T5			160	-	120	-	8	6
	T6 (*)			190	-	150	-	8	6
	T64 (*)			180	-	120	-	12	10
	T66 (*)			215	-	160	-	8	6
<b>Sections</b>	T4 (*)	e ≤ 25		120	-	60	-	16	14
	T5	e ≤ 5		160	-	120	-	8	6
		5 < e < 25		140	-	100	-	8	6
	T6 (*)	e ≤ 3		190	-	150	-	8	6
		3 < e < 25		170	-	140	-	8	6
	T64 (*)	e ≤ 15		180	-	120	-	12	10
T66 (*)	e ≤ 3		215	-	160	-	8	6	
	3 < e < 25		195	-	150	-	8	6	

NOTE (\*) for state F the values of the characteristics are just written as an indication

(1) see chart related to: "Description of the treatments and of the metallurgic states adopted in standard production"