Aluminium Alloy Data Sheet - Extruded Product

EN AW-6060 | AlMgSi

EN AW-6060 is a medium-strength aluminium alloy from the 6xxx series, primarily used for architectural and structural applications. It offers good corrosion resistance, excellent surface finish, and is well-suited to anodizing. The alloy is typically supplied in extruded form and is available in tempers such as T5 and T6, providing a balance of strength and formability.

Chemical Composition [1] (weight %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others
0,30-0,60	0,10-0,30	≤0,10	≤0,10	0,35-0,60	≤0,05	≤0,15	≤0,10	Each ≤0,05 Total ≤0,15

[1] according to EN 573-3:2024

Typical Applications

- Architectural and building products
- Door and window frames
- Electrical components and conduit
- Heat sinks, railings, ladders, and furniture
- Pipe and tube for irrigation systems
- Truck and trailer flooring

Mechanical Properties [2,3] (Extruded Profiles)

Temper	Wall Thickness t (mm)	R_m (MPa)	$R_{p0,2}$ (MPa)	A (%)	A_{50mm} (%)	Hardness Typical Value HBW
T4[a]	t≤25	120	60	16	14	50
T5	t≤5	160	120	8	6	60
	5<t ≤25	140	100	8	6	60
T6 [a]	t≤5	190	150	8	6	70
	5<t ≤25	170	140	8	6	70
T64 [a b]	t≤15	180	120	12	10	60
T66 [a]	t≤5	215	160	8	6	75
	5<t ≤25	195	150	8	6	75

[2] according to EN 755-2:2016 for extruded profile, minimum values unless else specified
[3] If a profile cross section comprises different thickness which fall in more than one set of specified mechanical property values, the lowest specified value shall be considered as valid for the whole profile cross section
[a] Properties may be obtained by press quenching
[b] Bending Quality

Temper Designation [4]

T4	Solution heat treated and naturally aged
T5	Cooled from an elevated temperature shaping process and then artifically aged
T6	Solution heat treated and artificially aged
T64	Solution heat-treated and then artificially aged in underageing conditions (between T6 and T61) to improve formability
T66	Solution heat-treated and then artificially aged - mechanical property level higher than T6 achieved through special control of the process 6000 series alloys)

[4] according to EN 515:2017

Physical Properties (Typical Values) [5]

Property	Value	Unit
Density	2.70	g/cm^3
Melting Range	610-650	°C
Thermal Conductivity	200-220	W/m.K
Electrical Conductivity	27-32	MS/m
Modulus of Elasticity	69	GPa
Coefficient of Expansion	23.4	$10^{-6}K^{-1}$

[5] The values presented above are typical for Aluminum Alloy 6060 and may vary depending on manufacturing process, temper condition, and specific application. They are intended for general information purposes only and should not be considered as guaranteed specifications

Weldability

The alloy is suitable for welding using TIG, MIG or laser welding processes. Recommended filler materials include AlMg5, AlSi5, and AlMg3, particularly when anodizing is required.

Note: Mechanical properties may be reduced in the heat-affected zone after welding.

Recommended Storage Condition

Store in dry, covered, and well-ventilated environments.

Protect from direct sunlight, high humidity, and chemical vapours.

Prevent mechanical damage by using proper packaging or vertical stacking when possible