ALTINEL ALÜMİNYUM ve PVC SANAYİ TİCARET A.Ş.

EN AW 6063 is a high-strength alloy used for applications that do not require special technical features. Profiles with simple or complex shapes can be produced with very nice surface characteristics. Suitable for surface coatings such as anodic oxidation or powder coating.

Areas where this alloy is used are typically as follows:

Architectural doors and windows, façades, furniture parts, flag posts, office equipments, irrigation, heating and cooling pipes, handrails and railings, construction and civil engineering applications, façade applications, glass and balcony sliding systems, shower screens, billboards, showcases, and stage systems, stove production, radiator production, cooling industry, etc.

Si	**Fe**	**Cu**	**Mn**	**Mg**	**Cr**	**Zn**	**Ti**	**Other**		**Al**
								Each	Total	
0,20-0,60	0,35	0,10	0,10	0,45-0,90	0,10	0,10	0,10	0,05	0,02	Rest

Density **gr/cm3**	Melting Range C	Electrical Conductivity MS/m	Thermal Conductivity w/Mk	Thermal expansion 10 -6/K	Elasticity Modulus MPa	Rupture Modulus MPa
2,7	585-650	34-38	200-220	23,4	69500	26100

Hardening	Wall thickness	Applied force	Tensile strength	Elongation min	min	Brinell Hardness
	e* mm	**R**po,2 min Mpa	**R**m min Mpa	**A**50mm %	A %	HB**
T4	e<25	65	130	12	14	45
T5	e<3	130	175	6	8	55
	3<e<25	110	160	5	7	50
T6	e<10	170	215	6	8	65
	10<e<25	160	195	6	8	60
T66	e<10	200	245	6	8	75
	10<e<25	180	225	6	8	70

** HB hardness values are given for indicative purpose only.

T4	Heat treated & left to itself
T5	Cooled down from the high temperature during production & artificially worn-out (accelerated hardening)
T6	Heat treated & artificially worn-out (accelerated hardening). Requires water-cooler press.
T66	Cooled down from the high temperature during production & artificially worn-out (accelerated hardening) but taken up to mechanical values of higher levels through special production processes.

Weldability*:**	Gas:**3** TIG: **2**	MIG:**1** (Filling materials (EN ISO 18273)	
Formability*:**	Hardening T4 :3	T5&T6: 2	
Corrosion resistance***	Atmosphere : **2**	Sea water: **2-3**	
Coating features*:**	Protection by anodising: **1**	Decorative anodisation:**3**	Coating:**2**
*****Quality ranking:**	From 1 to 6	1 very good	6 Inappropriate.

AL MG Sİ 0.5 (EN AW 6063) ALLOY PROFILES ARE PRODUCED ACCORDING TO TS EN 515 THROUGH TEMPER TREATMENT WITH TEMPER CONDITION F 22 / T5; AND ITS MECHANICAL FEATURES COMPLY WITH TS EN 755-2.
SPECTRAL ANALYSIS COMPLIES WITH TS pr EN 573-3 REQUIREMENTS.
STANDARD : TS 5247 PR EN 12020-1
SIZE SHAPE TOLERANCES : TS EN 12020-2

We do hereby declare that no substances such as asbestos, cadmium, mercury, lithium, selenium, etc. are released as a result of production process of products, nor such substances are available in the product.

Element	EN AW 6060	EN AW 6063	EN AW 6005	EN AW 6005A	EN AW 6082
Si :	0,30 - 0,6	0,20 - 0,60	0,6-0,9	0,50-0,9	0,7-1,3
Mg :	0,35 - 0,6	0,45 - 0,90	0,40-0,6	0,40-0,7	0,6-1,2
Fe :	0,10 - 0,30	0,35 (maximum)	0,35	0,35	0,50
Cr :	0,05	0,10 (maximum)	0,10	0,30 (*)	0,25
Cu :	0,10	0,10 (maximum)	0,10	0,30	0,10
Zn :	0,15	0,10 (maximum)	0,10	0,20	0,20
Mn :	0,10	0,10 (maximum)	0,10	0,50 (*)	0,40-1
Ti :	0,10	0,10 /maximum)	0,10	0,10	0,10
Other :	0.05 % max. each total 0.15 % max.	0.05 % max. each total 0.15 % max.	0.05 % max. each total 0.15 % max.	0.05 % max. each total 0.15 % max.	0.05 % max. each total 0.15 % max.

(*) In 6005A alloy, the total of Mn+Cr must be between 0,12-0,50 %
Note: 1- The elements with single values reflect the maximum values allowable for impurity.
2- Values indicated us upper and lower limits are elements which must be absolutely available as alloy elements. Concentration must be between these values.

In 6XXX series (AlMGsi), alloys which have widest application in architectural – construction industries are 6060 and 6063 (EN and new TS notation) and AlMgSi0.5 (DIN and previous TS notation). Their chemical compositions are generally the ssame, while they have very slight differences of lower and upper limits. EN AW / AA 6005, 6005A and 6082 aluminium alloys are preferred for engineering applications which require higher values of mechanical features.

Standards related to the product:

EN 15088 Aluminium and Aluminium Alloys. Structural products for construction works. Technical Conditions for Inspection And Delivery

EN 755-1 Aluminium and Aluminium Alloys. Extruded Rod / Bar, Tube and Profiles. Part 1: Technical Conditions for Inspection And Delivery

EN 12020-1 Aluminium and Aluminium Alloys. Extruded Precision Profiles in Alloys EN AW-6060 and EN AW 6063 - Part 1: Technical Conditions for Inspection And Delivery