ALUMINIUM EN-AW 6060

Die Aluminiumlegierung 6060 ist eine wärmebehandelbare Legierung mit mittlerer Festigkeit und einer etwas geringren Festigkeit als 6005A. Es hat eine sehr gute Korrosionsbeständigkeit, eine sehr gute Schweißbarkeit und eine gute Kaltumformbarkeit. Es wird häufig für komplexe Querschnitte verwendet und hat ein sehr gutes Anodisierungsverhalten.

Alloy	Forms	Characteristics - Properties	Applications
EN - AW 6060	• Extruded round rod/bar	• Very good corrosion resistance • Medium strength • Comlex sections • Anodising quality	Architectural sections, frames, lightings, railling, ladders, furniture, fences, flooring

Alloy	Tempers	Temper designation (EN 515)
EN - AW 6060	O	Annealed wrought alloys
	T4	Solution heat treated & natural aged
	T5	Cooled from an elevated temperature forming operation & artificially aged (precipitation hardened)
	T6	Solution heat treated & artificially aged (precipitation hardened) Press quenching required
	T64	Solution heat treated & artificially aged (precipitation hardened) Under aged to improve formability (bending temper)
	T66	Cooled from an elevated temperature forming operation & artificially aged (precipitation hardened) to a higher level of mechanical properties through special control of manufacturing processes. Press quenching requierd.

Aluminium & aluminium alloys
Extruded rod/bar,
tubes and precision profiles

EN 755-1	Technical conditions for inspection & delivery
EN 755-2	Mechanical properties
EN 755-3	Round bars, tolerances on dimension & form
EN 755-4	Square bars, tolerances on dimension & form
EN 755-5	Rectangular bars, tolerances on dimension & form
EN 755-6	Hexagonal bars, tolerances on dimension & form
EN 755-7	Seamless tubes, tolerances on dimension & form
EN 755-9	Profiles, tolerances on dimension & form
EN- 12020-1	Technical conditions for inspection & delivery (precision profiles)
EN- 12020-2	Tolerances on dimension & form (precision profiles)

Chemical composition according to EN573-3 (EN - AW %)

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others		Al
									Each	Total	
6060	0,30-0,60	0,10-0,30	0,10	0,10	0,35-0,60	0,05	0,15	0,10	0,05	0,15	Rest

Physical properties	
Alloys EN - AW	6060
Metalic range °C	585-650
Density g/cm³	2,70
Electrical conductivity MS/m	34-38
Thermal conductivity W/(m K)	200-220
Specific Heat J/(Kg K)	898
Thermal expansion values	
-50 to 20 °C (10^{-6} K)	21,8
20 to 100 °C (10^{-6} K)	23,4
20 to 200 °C (10^{-6} K)	24,5
20 to 300 °C (10^{-6} K)	25,6
YoungsModulusMpa	69500
ShearModulusMpa	26100

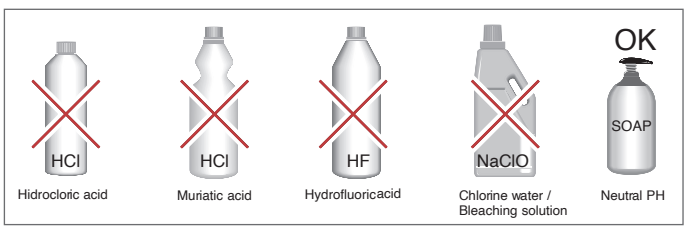
Mechanical properties according to EN 755-2 extruded profiles

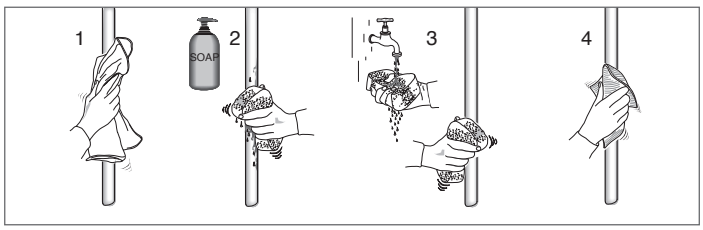
Alloy	Temper	Wall Thickness e mm*	Tensile strength Rm Mpa min	Proof stress Rpo,2 Mpa min	Elongation		Brinell Hardness HB**
					A50mm % min	A % min	
EN -AW 6060	T4	e ≤ 25	120	60	14	16	45
	T5	e ≤ 5	160	120	6	8	55
	T6	e ≤ 3	190	150	6	8	65
		3 < e ≤ 25	170	140	6	8	60
	T66	e ≤ 3	215	160	6	8	70
		3 < e ≤ 25	195	150	6	8	65

* For different wall thicknesses of a given profile, the lowest specified values of properties shall be considered as valid for the whole profile cross-section.

** The values for the HB hardness are indicative only.

REINIGUNG





MATERIALIEN UND AUSFÜHRUNGEN

MATERIAL	AUSFÜHRUNG		.XX	* indikative Farben
ALUMINUM	Standard:			
	ELOXIERT	Silber	**.69**	
	SATINIERT	Dunkel Bronze	**.67**	
		Schwarz	**.68**	
		Champagne (nur für selktierte Artikeln)	**.66**	
	Standard:			
	LACKIERT	Schwarz Ral 9005 Matt	**.40**	
		Schwarz Ral 9005 Glanzend	**.26**	
		Weiss Ral 9010	**.31**	
		Grau	**.32**	
		Champagne	**.38**	
		Bronze	**.39**	
		Architectural Bronze	**.36**	
		Medium Bronze	**.56**	
		Silber	**.41**	
		Gold	**.55**	