

ALUMINIUM ALLOY DATASHEET EN AW-6005A

International alloy name: EN AW-6063
 Chemical Symbol: EN AW – AlSiMg(A)
 DIN-Werkstoff no.: 3.3210
 Alloy type: Heat treatable alloy

elviq

MAIN USAGE

Marine constructions
 Ladders
 Train- and truckbuilding

MAIN PROPERTIES

Very good corrosion resistance
 Good workability
 Heat treatable alloy (T4 temper for bending)

IMPORTANT NORMS AND LITERATURE

EXTRUSION
 EN 755-1: Technical conditions for inspection and delivery
 EN 755-2: Mechanical properties
 EN 755-3 to EN 755-9: Tolerances on dimensions and forms for different extrusions

USAGES
 EN 13195: Specifications for wrought products for marine applications
 EN 602: Usage in the food industry

CHEMICAL COMPOSITION ACCORDING TO EN 573-3 (WEIGHT %, REMAINDER AL)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHER ELEMENTS	
								Each	Together
0.50-0.9	max 0.35	max 0.30	max 0.50	0.40-0.70	max 0.30	max 0.20	max 0.10	max 0.05	max 0.15

TYPICAL MECHANICAL PROPERTIES EN 755 - 2

TEMPER	PROFILE WALL THICKNESS <i>t</i> in mm *	R _m <i>Mpa (min)</i>	R _{p0,2} <i>Mpa (min)</i>	A <i>% (min)</i>	A _{50MM} <i>% (min)</i>	HARDNESS** HB
T4 open profile	≤ 25	180	90	15	13	50
T6 open profile	≤ 5	270	225	8	6	90
	5 < t ≤ 10	260	215	8	6	85
	10 < t ≤ 25	250	200	8	6	85
T4 hollow profile	≤ 10	180	90	15	13	50
T6 hollow profile	≤ 5	255	215	8	6	85
	5 < t ≤ 15	250	200	8	6	85

* For different wall thicknesses within one profile, the lowest specified properties shall be considered as valid for the whole profile cross section

** Values for information purposes only

PHYSICAL PROPERTIES

DENSITY <i>kg/m³</i>	MELTING RANGE <i>°C</i>	ELECTRICAL CONDUCTIVITY <i>MS/m</i>	THERMAL CONDUCTIVITY <i>W/mK</i>	CO-EFFICIENT OF THERMAL EXPANSION <i>10⁻⁶/K</i>	MODULUS OF ELASTICITY <i>N/mm²</i>
2700	585-650	26-32	180-220	23.4	69500

PROPERTIES AND INFORMATION (RANGE FROM 1-VERY GOOD TO 6-UNSUITABLE)

CORROSION RESISTANCE		MACHINING CHARACTERISTICS		SURFACE TREATMENT		WELDABILITY			
General	1	Marine	2	T4 temper	3	Decorative anodising	4	Gas	3
				T5 and T6 temper	2	Hard/protective anodising	1	TIG	2
Hot workability Extrusion			2					MIG	2