

ALUMINIUM ALLOY DATASHEET EN AW-6082

International alloy name: EN AW-6082
 Chemical Symbol: EN AW – AlSi1MgMn
 DIN-Werkstoff no.: 3.2315
 Alloy type: Heat treatable alloy

elviq

MAIN USAGE

Scaffolding elements
 Mobile cranes
 Machine building
 Rail coach parts

MAIN PROPERTIES

Very good corrosion resistance
 Good workability
 Good machinability
 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
0.70-1.3	max 0.50	max 0.10	0.40-1.00	0.60-1.20	max 0.25	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	≤ 25	205	110	14	12	70
T5 open profile	≤ 5	270	230	8	6	90
T6 open profile	≤ 5 5 < t ≤ 15	290 310	250 260	8 10	6 8	95 95
T5 hollow profile	≤ 5	270	230	8	6	90
T6 hollow profile	≤ 5 5 < t ≤ 15	290 310	250 260	8 10	6 8	95 95

* 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	24-32	170-220	23.4	69500

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

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