

Aluminum Alloy Equivalents - 10 wrought alloys across AA / UNS, EN 573-3 (EN AW, DIN Werkstoffnummer), JIS H4040, G

6061 = EN AW-6061 (AlMg1SiCu, 3.3211) = A6061 = GB 6061 (legacy LD30). Europe stocks 6082 (AlSi1MgMn, 3.2315) instead: Si 0.7-1.3 vs 0.40-0.8 %, Cu <=0.10 vs 0.15-0.40 %, T6 bar 310/270 vs 290/240 MPa - nearest, not the same. 7075 = EN AW-7075 (AlZn5.5MgCu, 3.4365) = A7075 = GB 7075; China's 7A04 (LC4) and 7A09 are near-alloys, not equivalents. Rating: direct = same registration; nearest = the other continent's stock alloy in the same role.

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Crosswalk

AA	UNS	EN AW name - number (Werkstoff)	JIS	GB/T 3190	BS	Rating
6xxx Al-Mg-Si - the general machining alloys						
6061	A96061	AlMg1SiCu - EN AW-6061 (3.3211)	A6061	6061 (legacy LD30)	H20	direct
6082	A96082	AlSi1MgMn - EN AW-6082 (3.2315)	-	6082	H30 / HE30	nearest
6063	A96063	AlMg0.7Si - EN AW-6063 (3.3206)	A6063	6063 (legacy LD31)	H19 / HE9	direct
6060	A96060	AlMgSi - EN AW-6060 (3.3206)	-	6060	-	nearest
7xxx and 2xxx - the high-strength alloys						
7075	A97075	AlZn5.5MgCu - EN AW-7075 (3.4365)	A7075	7075 (domestic near-alloy 7A09, legacy LC9)	L95 / 2L95	direct
2024	A92024	AlCu4Mg1 - EN AW-2024 (3.1355)	A2024	2024 (domestic near-alloy 2A12, legacy LY12)	2L97 / L109	direct
2011	A92011	AlCu6BiPb - EN AW-2011 (3.1655)	A2011	2011	FC1	direct
5xxx Al-Mg - the marine and welded alloys						
5083	A95083	AlMg4.5Mn0.7 - EN AW-5083 (3.3547)	A5083	5083	N8	direct
5052	A95052	AlMg2.5 - EN AW-5052 (3.3523)	A5052	5052	-	direct
5754	A95754	AlMg3 - EN AW-5754 (3.3535)	-	5754	-	nearest

Composition bands, mass % (remainder Al)

Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6061	0.40-0.8	<=0.7	0.15-0.40	<=0.15	0.8-1.2	0.04-0.35	<=0.25	<=0.15
6082	0.7-1.3	<=0.50	<=0.10	0.40-1.0	0.6-1.2	<=0.25	<=0.20	<=0.10
6063	0.20-0.6	<=0.35	<=0.10	<=0.10	0.45-0.9	<=0.10	<=0.10	<=0.10
7075	<=0.40	<=0.50	1.2-2.0	<=0.30	2.1-2.9	0.18-0.28	5.1-6.1	<=0.20
2024	<=0.50	<=0.50	3.8-4.9	0.30-0.9	1.2-1.8	<=0.10	<=0.25	<=0.15
2011	<=0.40	<=0.7	5.0-6.0	-	-	-	<=0.30	- (Bi 0.20-0.6, Pb 0.20-0.6)
5083	<=0.40	<=0.40	<=0.10	0.40-1.0	4.0-4.9	0.05-0.25	<=0.25	<=0.15
5052	<=0.25	<=0.40	<=0.10	<=0.10	2.2-2.8	0.15-0.35	<=0.10	-
5754	<=0.40	<=0.40	<=0.10	<=0.50	2.6-3.6	<=0.30	<=0.20	<=0.15 (std)
6060	0.30-0.6	0.10-0.30	<=0.10	<=0.10	0.35-0.6	<=0.05	<=0.15	<=0.10 (std)

T6 minimums: 6061 290/240 MPa (Wikipedia, ASTM B211 basis); 6082 bar 310/270 MPa (aircraftmaterials); 6063 190/160 MPa; 7075-T6 typical 560/480 MPa. Temper codes (T6, T651, T5, H32, H111, H321) are identical in ANSI H35.1 and EN 515. 2011 contains 0.20-0.6 % Pb; lead-free machining alloys: 2011A, 6026, 6262. 6xxx alloys anodise evenly; 6061 and 6082 give different tones and are not mixed in one anodised assembly.