

Commonly Used Aluminium Alloys & Suggested Properties

BS EN 1706: 1988 Alloys

Alloy Designation (Numerical)	Alloy Designation Symbol)	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Pb	Sn	Ti	Others (each)	Others (Total)	Equivalent BS 1490 Alloy	Castings Process
EN AC-42000	EN AC-AL Si7Mg	6.5-7.5	0.55	0.20	0.35	0.20-0.65	-	0.15	0.15	0.15	0.05	0.05-0.25	0.05	0.15	LM25	sand/ chill
EN AC-44100	EN AC-AL Si12(b)	10.5-13.5	0.65	0.15	0.55	0.1	-	0.10	0.15	0.10	-	0.20	0.05	0.15	LM6	sand/ chill
EN AC-45200	EN AC-AL Si5Cu3Mn	4.5-6.5	0.80	2.5-4.0	0.20-0.55	0.40	-	0.30	0.55	0.20	0.10	0.20	0.05	0.25	LM4	sand/ chill
EN AC-46600	EN AC-AL Si7Cu2	6.0-8.0	0.80	1.5-2.5	0.15-0.65	0.35	-	0.35	1	0.25	0.15	0.25	0.05	0.15	LM27	sand/ chill
EN AC-46500	EN AC-AL Si9Cu3FeZn	8.0-11.0	1.3	2.0-4.0	0.55	0.50-0.55	0.15	0.55	3	0.35	0.25	0.25	0.05	0.25	LM24	Pressure d/c

Mechanical Properties of Commonly Used BS EN 1706: 1988 Aluminium Alloys

Alloy Designation (Numerical)	Alloy Designation Symbol)	Casting Method	Temper Condition	Tensile Strength (MPa)	Proof Stress (MPa)	Elongation (%)	Brinell Hardness Number (BHN)	Equivalent BS 1490 Alloy
EN AC-42000	EN AC-AL Si7Mg	Sand	F	140	80	2	50	LM25
		Sand	T6	220	180	1	75	
		Chill	F	170	90	2.5	55	
		Chill	T6	260	220	1	90	
		Chill	T64	240	200	2	80	
EN AC-441000	EN AC-AL Si12(b)	Sand	F	150	70	4	50	LM6
		Chill	F	170	80	5	55	
EN AC-45200	EN AC-AL Si5Cu3Mn	Sand	F	140	70	1	60	LM4
		Sand	T6	230	200	< 1	90	
		Chill	F	160	80	1	70	
		Chill	T6	280	230	< 1	90	
EN AC-46600	EN AC-AL Si7Cu2	Sand	F	150	90	1	60	LM27
		Chill	F	170	100	1	75	
EN AC-42500	EN AC-AL Si9Cu3FeZn	Pressure DieCasting	F	240	140	1	80	LM24