

Alloy	Alloy System	Key Alloying Elements (%)	Typical Strength (UTS MPa)	Ductility (%)	What Makes This Alloy Unique
LM0	Al-Cu	High Purity Al + Cu 4-5	180-230	3-5	High purity & conductivity alloy for electrical couplings,
LM4	Al-Si-Cu	Si 4-6, Cu 2-4	200-260	2-4	Silicon improves casting flow while copper adds strength.
LM6	Al-Si	Si 10-13	160-200	5-10	Very high silicon gives excellent fluidity for die casting. The standard in corrosion resistant aluminium.
LM9	Al-Si-Cu	Si 9-11, Cu 2-3	200-250	2-4	High silicon enables pressure-tight castings and fluidity for casting complex shapes.
LM13	Al-Si-Cu-Ni-Mg	Si 10-12, Ni, Cu, Mg	250-320	1-3	Nickel and copper maintain strength at elevated temperatures.
LM25	Al-Si-Mg	Si 6-7.5, Mg 0.2-0.6	220-260	4-8	Magnesium allows precipitation hardening with good corrosion resistance.
LM27	Al-Si-Cu-Mg	Si 6-8, Cu 2-3	230-280	2-5	Copper strengthens the alloy and improves heat & wear resistance.
LM31	Al-Zn-Mg	Zn 5-6, Mg 1-2	300-350	1-3	Zn-Mg precipitation hardening provides very high strength. Where strength is the predominant requirement.
A356	Al-Si-Mg	Si 6.5-7.5, Mg 0.25-0.45	230-280	5-10	Excellent balance of castability, strength and ductility.
A357	Al-Si-Mg	Si 6.5-7.5, Mg 0.45-0.7	260-320	3-8	Higher magnesium increases strength after heat treatment.
Zinc Zn21	Zn - Al	Al 21, Cu 1-3	280-330	1-3	21% Al High strength and hardness with low ductility, making Zn21 ideal for rigid, precision components.