

Chemical Composition of Magnesium Alloy (%) ASTM standard

Type	Al	Mn	Zn	Fe	Cu	Si	Ni	Be	Other
AZ91D	8.5-9.5	0.17-0.40	0.45-0.9	0.004	0.025	0.08	0.001	0.0005-0.0015	0.01
AM60B	5.6-6.4	0.26-0.50	0.2	0.004	0.008	0.08	0.001	0.0005-0.0015	0.01
AM50A	4.5-5.3	0.28-0.50	0.2	0.004	0.008	0.08	0.001	0.0005-0.0015	0.01
AZ63	5.3-6.7	0.15-0.7	2.5-3.5	0.003	0.02	0.1	0.002	-	-
AZ31	2.5-3.5	0.2-1.0	0.6-1.4	0.005	0.05	0.1	0.005	-	-
AS31	3.3-4.0	0.25-0.50	0.05-0.20	0.003	0.008	0.7-1.2	0.001	0.0005-0.0015	0.01

The chemical composition of magnesium alloy (%) according to national standard GB/T19078-2003

Type	Al	Zn	Mn	Sn	Fe	Cu	Ni	Single rest Impurity	Total amount of impurities	Maximum
AZ91D	8.5-9.5	0.45-0.90	0.17-0.40	0.05	0.004	0.015	0.001	--	Margin	0.023
AM60B	5.6-6.4	< 0.2	0.26-0.50	0.05	0.004	0.008	0.001	0.01	--	0.015
AM50A	4.5-5.3	< 0.2	0.28-0.50	0.05	0.004	0.008	0.001	0.01	--	0.015
AS41A	3.7-3.8	< 0.1	0.22-0.48	0.6-1.4	--	0.04	0.001	--	0.3	--
AM20	1.7-2.2	< 0.1	> 0.5	0.05	0.004	0.008	0.001	0.01	--	< 0.008

Mechanical properties of magnesium alloys

Type	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)
AZ91D	200-250	150-170	0.5-3.0
AM60B	190-230	120-150	4-8
AM50A	180-220	110-140	5-9
AS41A	230-260	120-150	3-6
AM20	160-210	90-120	8-12

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