



## Aluminium Alloy Chemical Compositions (British Standard BS1490:1988)

Alloy Type	Si %	Fe %	Cu %	Mn %	Mg %	Zn %	Pb %	Sn %	Ni %	Ti %	Additional Elements	Others Each : Total
LMO	0.3	0.4	0.03	0.03	0.03	0.07	0.03	0.03	0.03	-	Al 99.5 min	- :-
LM2	9.0 - 11.5	1.0	0.7 - 2.5	0.5	0.3	2.0	0.3	0.2	0.5	0.2		- : 0.5
LM4	4.0 - 6.0	0.8	2.0 - 4.0	0.2 - 0.6	0.2	0.5	0.1	0.1	0.3	0.2		0.05 : 0.15
LM5	0.3	0.6	0.1	0.3 - 0.7	3.0 - 6.0	0.1	0.05	0.05	0.1	0.2		0.05 : 0.15
LM6	10.0 - 13.0	0.6	0.1	0.5	0.1	0.1	0.1	0.05	0.1	0.2		0.05 : 0.15
LM9	10.0 - 13.0	0.6	0.2	0.3 - 0.7	0.2 - 0.6	0.1	0.1	0.05	0.1	0.2		0.05 : 0.15
LM12	2.5	1.0	9.0 - 11.0	0.60	0.2 - 0.4	0.8	0.1	0.1	0.5	0.2		0.05 : 0.15
LM13	10.0 - 13.0	1.0	0.7 - 1.5	0.5	0.8 - 1.5	0.5	0.1	0.1	1.5	0.2		0.05 : 0.15
LM16	4.5 - 5.5	0.6	1.0 - 1.5	0.5	0.4 - 0.6	0.	0.1	0.05	0.25	0.2#		0.05 : 0.15
LM20	10.0 - 13.0	1.0	0.4	0.5	0.2	0.2	0.1	0.1	0.1	0.2		0.05 : 0.20
LM21	5.0 - 7.0	1.0	3.0 - 5.0	0.2 - 0.6	0.1 - 0.3	2.0	0.2	0.1	0.3	0.2		0.05 : 0.15
LM22	4.0 - 6.0	0.6	2.8 - 3.8	0.2 - 0.6	0.05	0.15	0.1	0.05	0.15	0.2		0.05 : 0.15
LM24	7.5 - 9.5	1.3	3.0 - 4.0	0.5	0.3	3.0	0.3	0.2	0.5	0.2		- : 0.50
LM25	6.5 - 7.5	0.5	0.2	0.3	0.2 - 0.6	0.1	0.1	0.05	0.1	0.2#		0.05 : 0.15



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Alloy Type	Si %	Fe %	Cu %	Mn %	Mg %	Zn %	Pb %	Sn %	Ni %	Ti %	Additional Elements	Others Each : Total
LM26	8.5 - 10.5	1.2	2.0 - 4.0	0.5	0.5 - 1.5	1.0	0.2	0.1	1.0	0.2		0.05 : 0.15
LM27	6.0 - 8.0	0.8	1.5 - 2.5	0.2 - 0.6	0.35	1.0	0.2	0.1	0.3	0.2		0.05 : 0.15
LM28*	17.0 - 20.0	0.7	1.3 - 1.8	0.6	0.8 - 1.5	0.2	0.1	0.1	0.8 - 1.5	0.2	Cr 0.6, Co 0.5	0.10 : 0.30
LM29*	22.0 - 25.0	0.7	0.8 - 1.3	0.6	0.8 - 1.3	0.2	0.1	0.1	0.8 - 1.3	0.2	Cr 0.6, Co 0.5	0.10 : 0.30
LM30	16.0 - 18.0	1.1	4.0 - 5.0	0.3	0.4 - 0.7	0.2	0.1	0.1	0.1	0.2		0.10 : 0.30
LM31+	0.25	0.5	0.1	0.1	0.5 - 0.75	4.8 - 5.7	0.05	0.05	0.1	0.25#	Cr 0.4 - 0.6	0.05 : 0.15
ALSI - 62	5.5 - 7.0	0.4	1.8 - 2.5	0.2 - 0.6	0.3 - 0.7	-	-	-	0.2		BAL	
ALSI - 132	11.0 - 12.5	1.0	1.75 - 2.5	0.5	0.3	1.4	0.1	0.3	0.1		BAL	

Notes:

- Single figures in this table are the maximum value
- To determine whether a composition found by analysis conforms to the requirements of the specification, the analytical figure should be rounded off to the nearest unit in the last right-hand place of figures used in the corresponding limits in the table (according to BS 1957)
- In cases where alloys are required in the modified condition, the level of any modifying element present is not limited by the specified maximum value for other elements

# 0.05% minimum if Titanium alone is used for grain refining

\* LM28 and LM29 are also subject to metallographic structure requirements.

+ LM31 castings in the M condition have to be naturally aged for 3 weeks before use or before determination of mechanical properties.

**Note:** The above specification is for reference purposes only