



AARYAN ALLOYS INTERNATIONAL

ALUMINUM ALLOY INGOT

We manufacture and supply a wide range of Aluminium alloy ingots that are in complete compatibility with Euro six norms. Our AAI Aluminium alloys find wide applications in various Aluminium pressure die casting units, automotive parts manufacturing units, building and construction material etc. Over the period we have carved a niche as one of the leading Aluminium alloy ingots and Aluminium ingots manufacturers and exporters from India. Fabricated from the finest quality alloy our ingots are valued for increasing fuel efficiencies of automobiles and reducing their power consumption. Being in sync with environment and sustainable development, our range of products is recyclable.

ALUMINUM ALLOYS AS PER INTERNATIONAL STANDARDS

Indian / UK Standard

BS1490:1970	IS617:1959	Si	Fe	Cu	Mn	Mg	Zn	Ni	Ti	Pb	Al
LM0	A0	0.30 Max	0.40 Max	0.03 Max	0.03 Max	0.03 Max	0.07 Max	0.03 Max	-	0.03 Max	BAL
LM1	A1	2.0-4.0	1.0 Max	6.0-8.0	0.60 Max	0.15 Max	2.0-4.0	0.50 Max	0.20 Max	0.03 Max	BAL
LM2	A2	9.0-11.5	1.0 Max	0.70-2.50	0.50 Max	0.30 Max	2.0 Max	0.50 Max	0.20 Max	0.03 Max	BAL
LM3	A3	1.30 Max	1.0 Max	2.50-4.50	0.50 Max	0.10 Max	9.0-13.0	0.50 Max	0.20 Max	0.03 Max	BAL
LM4	A4	4.0-6.0	0.80 Max	2.00-4.00	0.2-0.6	0.15 Max	0.50 Max	0.30 Max	0.20 Max	0.10 Max	BAL
LM5	A5	0.30 Max	0.60 max	0.10 Max	0.3-0.7	3.0-6.0	0.10 Max	0.10 Max	0.05 Max	0.05 Max	BAL
LM6	A6	10.0-13.0	0.60 Max	0.10 Max	0.50 Max	0.10 Max	0.10 Max	0.10 Max	0.10 Max	0.10 Max	BAL
LM7	A7	1.5-3.5	0.3-0.4	1.0-2.50	0.10 Max	0.05-0.2	0.10 Max	0.50-1.70	0.05 Max	0.05 Max	BAL
LM8	A8	3.5-6.0	0.60 Max	0.10 Max	0.50 Max	0.3-0.8	0.10 Max	0.10 Max	0.05 Max	0.10 Max	BAL
LM9	A9	10.0-13.0	0.60 Max	0.10 Max	0.3-0.7	0.2-0.6	0.10 Max	0.10 Max	0.20 Max	0.10 Max	BAL
LM10	A10	0.25 Max	0.35 Max	0.10 Max	0.10 Max	9.5-11.0	0.10 Max	0.10 Max	0.20 Max	0.05 Max	BAL
LM11	A11	0.25 Max	0.25 Max	4.0-5.0	0.10 Max	0.10 Max	0.10 Max	0.10 Max	0.05 Max	0.05 Max	BAL
LM12	A12	2.50 Max	1.00 Max	9.0-11.0	0.60 Max	0.2-0.4	0.80 Max	0.50 Max	0.20 Max	0.10 Max	BAL
LM13	A13	10.0-13.0	1.00 Max	0.70-1.50	0.50 Max	0.8-1.50	0.50 Max	1.50 Max	0.20 Max	0.10 Max	BAL
LM14	A14	0.60 Max	0.60 Max	3.5-4.5	0.60 Max	1.2-1.7	0.10 Max	1.8-2.3	0.05 Max	0.05 Max	BAL
LM15	A15	0.60-2.00	0.80-1.40	0.3-3.0	0.10 Max	0.5-1.7	0.10 Max	0.5-2.0	0.05 Max	0.05 Max	BAL
LM16	A16	4.50-6.00	0.60 Max	1.0-1.5	0.50 Max	0.4-0.6	0.10 Max	0.25 Max	0.20 Max	0.10 Max	BAL
LM18	A18	4.5-6.0	0.60 Max	0.10 Max	0.50 Max	0.10 Max	0.10 Max	0.10 Max	0.20 Max	0.10 Max	BAL
LM20	-	10.0-13.0	1.0 Max	0.40 Max	0.5 Max	0.2 Max	0.2 Max	0.1 Max	0.2 Max	0.1 Max	BAL
LM21	-	5.0-7.0	1.0 Max	3.0-5.0	0.2-0.6	0.1-0.3	2.0 max	0.3 Max	0.2 Max	0.2 Max	BAL
LM22	A22	4.0-6.0	0.60 Max	2.8-3.8	0.2-0.6	0.05 Max	0.15 max	0.15 Max	0.2 Max	0.1 Max	BAL
LM23	-	1.2-2.8	0.8-1.4	0.8-2.0	0.1 Max	0.05-0.2	0.10 Max	0.8-1.7	0.05 Max	0.05 Max	BAL
LM24	A24	7.5-9.5	1.3 Max	3.0-4.0	0.5 Max	0.30 Max	3.0 max	0.1 Max	0.2 Max	0.3 Max	BAL
LM25	A25	6.5-7.5	0.5 Max	0.1 Max	0.3 Max	0.2-0.45	0.1 Max	1.0 Max	0.2 Max	0.1 Max	BAL
LM26	A26	8.5-10.5	1.2 Max	2.0-4.0	0.5 Max	0.5-1.5	1.0 Max	0.3 Max	0.2 Max	0.2 Max	BAL
LM27	A27	6.0-8.0	0.8 Max	1.5-2.5	0.2-0.6	0.3 Max	1.0 Max	0.8-1.5	0.2 Max	0.2 Max	BAL
LM28	A28	17.0-20.0	0.7 Max	1.3-1.8	0.6 Max	0.8-1.5	0.2 Max	-	0.2 Max	0.1 Max	BAL
LM29	A29	22.0-25.0	0.7 Max	0.8-1.3	0.6 Max	0.8-1.3	0.2 Max	0.8-1.3	0.2 Max	0.1 Max	BAL
LM30	A30	16.0-18.0	1.1 Max	4.0-5.0	0.3 max	0.4-0.7	0.2 Max	0.1 Max	0.2 Max	0.1 Max	BAL
ALSI-62	-	5.5-7.0	0.4 Max	1.8-2.5	0.2-0.6	0.3-0.7	-	-	0.2 Max	-	BAL
ALSI-132	-	11.0-12.5	1.0 Max	1.75-2.5	0.5 Max	0.3 Max	1.4 Max	0.3 Max	0.1 Max	0.1 Max	BAL

Japanese Standard

Alloy	Si	Fe	Cu	Mn	Mg	Zn	Ni	Ti	Pb	Sn	Cr	Al
ADC1	11.0-13.0	0.9 Max	1.0 Max	0.3 Max	0.3 Max	0.5 Max	0.5 Max	-	-	0.1 Max	-	BAL
ADC3	9.0-10.0	0.9 Max	0.6 Max	0.3 Max	0.4-0.6	0.5 Max	0.5 Max	-	-	0.1 Max	-	BAL
ADC5	0.3 Max	1.1 Max	0.2 Max	0.3 max	4.1-8.5	0.1 Max	0.1 Max	-	-	0.1 Max	-	BAL
ADC6	1.0 Max	0.8 Max	0.1 Max	0.4-0.6	2.6-4.0	0.4 Max	0.1 Max	-	-	0.1 Max	-	BAL
ADC10	7.5-9.5	0.9 Max	2.0-4.0	0.5 Max	0.3 Max	1.0 Max	0.5 Max	-	-	0.3 Max	-	BAL
ADC12	9.6-12.0	1.3 Max	1.5-3.5	0.5 Max	0.3 Max	1.0 Max	0.5 Max	-	-	0.3 Max	-	BAL
ADC14	16.0-18.0	0.9 Max	4.0-5.0	0.5 Max	0.5-0.65	1.5 Max	0.3 Max	-	-	0.3 Max	-	BAL
AC1A	1.20 Max	0.50 Max	4.0-5.0	0.30 Max	0.15 Max	0.30 Max	0.05 Max	0.25 Max	0.05 Max	0.05 Max	0.05 Max	BAL
AC1B	0.02 Max	0.35 Max	4.0-5.0	0.10 Max	0.15-0.35	0.10 Max	0.05 Max	0.05-0.30	0.05 Max	0.05 Max	0.05 Max	BAL
AC2A	4.0-6.0	0.80 Max	3.0-4.5	0.55 Max	0.25 Max	0.55 Max	0.30 Max	0.20 Max	0.15 Max	0.05 Max	0.15 Max	BAL
AC2B	5.0-7.0	1.00 Max	2.0-4.0	0.50 Max	0.50 Max	1.00 Max	0.35 Max	0.20 Max	0.20 Max	0.10 Max	0.20 Max	BAL
AC3A	10.0-13.0	0.80 Max	0.25 Max	0.35 Max	0.15 Max	0.30 Max	0.10 Max	0.20 Max	0.10 Max	0.10 Max	0.15 Max	BAL
AC4A	8.0-10.0	0.55 Max	0.25 Max	0.3-0.6	0.30-0.60	0.25 max	0.10 Max	0.20 Max	0.10 Max	0.05 Max	0.15 Max	BAL
AC4B	7.0-10.0	1.00 Max	2.0-4.0	0.50 Max	0.50 Max	1.00 Max	0.35 Max	0.20 Max	0.20 Max	0.10 Max	0.20 Max	BAL
AC4C	6.5-7.5	0.55 Max	0.25 Max	0.35 Max	0.25-0.45	0.35 Max	0.10 Max	0.20 Max	0.10 Max	0.55 Max	0.10 Max	BAL
AC4CH	6.5-7.5	0.20 Max	0.20 Max	0.10 Max	0.20-0.40	0.10 Max	0.05 Max	0.20 Max	0.05 Max	0.05 Max	0.05 Max	BAL
AC4D	4.5-5.5	0.60 Max	1.0-1.5	0.50 Max	0.4-0.6	0.30 Max	0.20 Max	0.10 Max	0.10 Max	0.05 Max	0.15 Max	BAL
AC5A	0.60 Max	0.80 Max	3.5-4.5	0.35 Max	1.2-1.8	0.15 Max	1.7-2.3	0.20 Max	0.05 Max	0.05 Max	0.15 Max	BAL
AC7A	0.20 Max	0.30 Max	0.10 Max	0.60 Max	3.5-5.5	0.15 Max	0.05 Max	0.20 Max	0.05 Max	0.05 Max	0.15 Max	BAL
AC7B	0.20 Max	0.30 Max	0.10 Max	0.10 Max	9.5-11.0	0.10 Max	0.05 Max	0.20 Max	0.05 Max	0.05 Max	0.15 Max	BAL
AC8A	11.00-13.0	0.80 Max	0.8-1.3	0.15 Max	0.7-1.3	0.15 Max	0.8-1.5	0.20 Max	0.05 Max	0.05 Max	0.10 Max	BAL
AC8B	8.5-10.5	1.00 Max	2.0-4.0	0.50 Max	0.50-1.5	0.50 Max	0.10-1.0	0.20 Max	0.10 Max	0.10 Max	0.10 Max	BAL
AC8C	8.5-10.5	1.00 Max	2.0-4.0	0.50 Max	0.50-1.6	0.50 Max	0.50 Max	0.20 Max	0.10 Max	0.10 Max	0.10 Max	BAL
AC9A	22.0-24.0	0.80 Max	0.50-1.5	0.50 Max	0.50-1.7	0.20 Max	0.50-1.5	0.20 Max	0.10 Max	0.10 Max	0.10 Max	BAL
AC9B	18.2	0.80 Max	0.50-1.6	0.50 Max	0.50-1.8	0.20 Max	0.50-1.0	0.20 Max	0.10 Max	0.10 Max	0.10 Max	BAL



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US Standard

ANSI	UNS	Si	Fe	Cu	Mn	Mg	Zn	Ni	Ti	Pb	Al
201.2	A02012	0.1 Max	0.1 Max	4.0-5.2	0.2-0.5	0.2-0.55	-	-	-	-	BAL
204.2	A02042	0.15 Max	0.1-0.2	4.2-4.9	0.05 Max	0.2-0.35	0.05 Max	0.03 Max	0.15-0.35	-	BAL
208.1	A02081	2.5-3.5	0.9 Max	3.5-4.5	0.5 Max	0.1 Max	1.0 Max	0.35 Max	0.15-0.25	-	BAL
208.2	A02082	2.5-3.5	0.8 Max	3.5-4.6	0.3 Max	0.03 Max	0.2 Max	-	0.25 Max	-	BAL
222.1	A02221	2.0 Max	1.2 Max	9.2-10.7	0.5 Max	0.2-0.35	0.8 Max	0.5 Max	0.2 Max	-	BAL
241.1	A02421	0.7 Max	0.8 Max	3.5-4.5	0.35 Max	1.3-1.8	0.35 Max	1.7-2.3	0.25 Max	0.25 Max	BAL
242.2	A02422	0.6 Max	0.6 Max	3.5-4.5	0.1 Max	1.3-1.8	0.1 Max	1.7-2.3	0.25 Max	-	BAL
A242.1	A12421	0.6 Max	0.6 Max	3.7-4.5	0.1 Max	1.3-1.7	0.1 Max	1.8-2.3	0.2 Max	0.15-0.25	BAL
A242.2	A12422	0.35 Max	0.6 Max	3.7-4.6	0.1 Max	1.3-1.7	0.1 Max	1.8-2.3	0.07-0.20	0.15-0.25	BAL
295.1	A02951	0.7-1.5	0.8 Max	4.0-5.0	0.35 Max	0.03 Max	0.35 Max	-	0.07-0.20	-	BAL
295.2	A02952	0.7-1.2	0.8 Max	4.0-5.0	0.3 Max	0.03 Max	0.3 Max	-	0.25 Max	-	BAL
296.1		2.0-3.0	0.9 Max	4.0-5.0	0.35 Max	0.05 Max	0.5 Max	0.35 Max	0.2 Max	-	BAL
296.2		2.0-3.0	0.8 Max	4.0-5.0	0.3 Max	0.03 Max	0.3 Max	-	0.25 Max	-	BAL
308.1	A03081	5.6-6.0	0.8 Max	4.0-5.0	0.5 Max	0.1 Max	1.0 Max	-	0.2 Max	-	BAL
308.2	A03082	5.0-6.0	0.8 Max	4.0-5.0	0.3 Max	0.1 Max	0.5 Max	-	0.25 Max	-	BAL
319.1	A03191	5.5-6.5	0.8 Max	3.0-4.0	0.5 Max	0.1 Max	1.0 Max	0.35 Max	0.2 Max	-	BAL
319.2	A03192	5.5-6.5	0.6 Max	3.0-4.0	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.25 Max	-	BAL
328.1	A03281	7.5-8.5	0.8 Max	1.0-2.0	0.2-0.6 Max	0.25-0.6	1.5 Max	0.25 Max	0.2 Max	0.25 Max	BAL
332.1	A03321	8.5-10.5	0.9 Max	2.0-4.0	0.5 Max	0.6-1.5	1.0 Max	0.5 Max	0.25 Max	-	BAL
332.2	A03322	8.5-10.0	0.6 Max	2.0-4.0	0.1 Max	0.9-1.3	0.1 Max	0.1 Max	0.25 Max	-	BAL
333.1	A03331	8.0-10.0	0.8 Max	3.0-4.0	0.5 Max	0.1-0.5	1.0 Max	0.5 Max	0.2 Max	-	BAL
336.1	A03361	11.0-13.0	0.9 Max	0.5-1.5	0.35 Max	0.8-1.3	0.35 Max	2.0-3.0	0.25 Max	-	BAL
336.2	A03362	11.0-13.0	0.9 Max	0.5-1.5	0.1 Max	0.9-1.3	0.1 Max	2.0-3.0	-	-	BAL
354.1	A03541	8.6-9.4	0.15 Max	1.6-2.0	0.1 Max	0.45-0.6	0.1 Max	-	0.2 Max	-	BAL
355.1	A03551	4.5-5.5	0.5 Max	1.0-1.5	0.5 Max	0.45-0.6	0.35 Max	-	0.25 Max	0.25 Max	BAL
355.2	A03552	4.5-5.5	0.14-0.25	1.0-1.5	0.05 Max	0.5-0.6	0.05 Max	-	0.2 Max	-	BAL
C355.2	A33552	4.5-5.5	0.13 Max	1.0-1.5	0.05 Max	0.5-0.6	0.05 Max	-	0.2 Max	-	BAL
356.1	A03561	6.5-7.5	0.5 Max	0.25 Max	0.35 Max	0.25-0.45	0.35 Max	-	0.2 Max	-	BAL
356.2	A03562	6.5-7.5	0.13-0.25	0.1 Max	0.05 Max	0.3-0.45	0.05 Max	-	0.25 Max	-	BAL
357.1	A03571	6.5-7.5	0.12 Max	0.05 Max	0.03 Max	0.45-0.6	0.05 Max	-	0.2 Max	-	BAL
A357.2	A13570	6.5-7.5	0.12 Max	0.1 Max	0.05 Max	0.45-0.7	0.05 Max	-	0.04-0.2	-	BAL
359.2	A03592	8.5-9.5	0.12 Max	0.1 Max	0.1 Max	0.55-0.7	0.1 Max	-	0.2 Max	-	BAL
360.2	A03602	9.0-10	0.7-1.1	0.1 Max	0.1 Max	0.45-0.6	0.4 Max	0.1 Max	0.15 Max	-	BAL
A360	A0360	9.0-10	1.3 Max	0.6 Max	0.35 Max	0.4-0.6	0.5 Max	0.5 Max	-	-	BAL
A360.1	A13601	9.0-10	1.0 Max	0.6 Max	0.1 Max	0.45-0.6	0.4 Max	-	-	-	BAL
A360.2	A13602	9.0-10	0.6 Max	0.1 Max	0.05 Max	0.45-0.6	0.05 Max	-	-	-	BAL
380.2	A03802	7.5-9.5	0.7-1.1	3.0-4.0	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.1 Max	-	BAL
A380	A0380	7.5-9.5	1.3 Max	3.0-4.0	0.5 Max	0.3 Max	3.0 Max	0.5 Max	0.5 Max	-	BAL
A380.1	A13801	7.5-9.5	1.0 Max	3.0-4.0	0.5 Max	0.1 Max	2.9 Max	0.5 Max	-	-	BAL
A380.2	A03602	7.5-9.5	0.6 Max	3.0-4.0	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.1 Max	-	BAL
A383	A0383	9.5-11.5	1.3 Max	2.0-3.0	0.5 Max	0.1 Max	0.3 Max	0.3 Max	-	-	BAL

GENERAL USES OF ALUMINIUM ALLOYS

- L.M. 0 Sand Castings for Electrical, Chemical, Food Applications
- L.M. 2 Widely used Alloy for all Types of Die Castings
- L.M. 4 The most versatile Alloy with very good castings characteristics. UTS can be greatly increased after heat treatment
- L.M. 5 Castings required maximum resistance to corrosion such as marine components can be casted in such and chill
- L.M. 6 Very suitable for large intricate thin walled castings in all type of moulds
- L.M. 9 Common to L.M.6 characteristics but higher U.T.S. after heat treatment
- L.M. 10 Suitable for sand and chill castings with high strength and shock resistance require special foundry technique; heat treated
- L.M. 11 Suitable for die and centrifugal castings
- L.M. 12 Mainly used where a very good machined surface finished and hardness is required
- L.M. 13 Used in piston castings
- L.M. 16 Castings requiring high mechanical properties can be casted in sand or chill process
- L.M. 18 High resistance to corrosion with good foundry characteristics
- L.M. 22 Used for chill castings requiring good foundry characteristics and ductility. Requires heat treatment
- L.M. 24 One of the two most widely used alloys for all types of castings
- L.M. 25 Suitable where good resistance to corrosion combined with high strength is required
- L.M. 28 Piston alloy with lower coefficient of expansion than LM 13
- L.M. 29 As LM 28 but lower coefficient of expansion
- L.M. 30 For unlined die cast cylinder block with low expansion and excellent wear resistance

ALUMINIUM ALLOYS AS PER CUSTOMER SPECIFICATION AND CUSTOMIZED MICROSTRUCTURE DESIGN

- Alloys for Aaryan Alloys International (AAI) Application
- Gravity / Sand Casting Primary Alloys
- High Purity LPDC Alloys
- Pressure Die Casting Alloys
- Investment Casting Alloys
- Aluminum Master Alloys
- Masters of Ti / B / Ti-B / Fe / Cu / Cr / Ni / Mn / etc