

METALLURGICAL AND MECHANICAL DATA AND TOLERANCES

ALLOY EQUIVALENTS TABLE

IS India (NEW)	(BS)U.K or I.S. (OLD)	(AA) U.S.A	(AICAN) Canada	DIN Germany	ASTM	(JIS) Japan	(AFNOR) France	Russia
19500	E1B	1050 or 1060	IS	Al 99.5	99.6 A	Al-1	A-5	-
19000	E1C	1100	2S	Al 99.0	99.0A	Al-3	A-4	A-2
19501	E1E	EC	CISDIA	E-Al 99.5	EC	Al-1	-	-
63401	E91E	6101	D50S	E-Al-Mg. Si-0.5	GS 10B	-	-	-
-	NE-3	3103	3S	Al Mn	-	-	3103	-
52000	NE4	5052	M57S	AlMg2	GR 20A	A2-SI	A-G3	AM
53000	NE5	5086	54S	AlMg3.5	GM 40A	-	-	-
63400	HE-9	6063	50S	AlMg Si 0.5	GS 10A	A2-S5	A-SG	-
24345	HE-15	2014	B26S	Al-Cu-Si	-	-	-	-
76528	HE-17	7075	-	AlZn5.5MgCu	7075	A7075	7075	-
65032	HE-20	6061	65S	Al Mg SiCu	GS 11A	A2-S4	-	-
64430	HE-30	6351/6082	B51S	AlMg Si1	6351	-	6081 (NP)	-
62400	-	6005	C51S	-	6005	-	-	-
64423	-	-	C62S	-	-	-	-	-
-	-	-	6262	-	AlMg1 SiPb	6262	-	-

TEMPER DESIGNATION TABLE

INDIA or U.K	U.S.A or CANADA	ISO TEMPER	Description of designation
O	O	O	Annealed
M	F	F	As fabricated, as manufactured or as cast
-	T ₃	TD	Solution heat-treated, and cold worked
W	T ₄	TB	Solution heat-treated, naturally aged and amenable to artificial ageing
P	T ₅	TE	Artificially aged or precipitation heat-treated
WP	T ₆	TF	Solution heat-treated & precipitation heat-treated
	H-21 H-1	H2A H1	Strain hardened to specified strength
	H-22 H-32	H2B H3B	1/4 Hard stabilized
	H-24 H-34	H2D H3D	1/2 Hard stabilized
	H-26 H-36	H2F H3F	3/4 Hard stabilized
	H-28 H-38	H2H H3H	Fully hard, stabilized



CHEMICAL COMPOSITION OF WROUGHT ALUMINIUM & ALUMINIUM ALLOYS

Designation New Old		Aluminium	Copper	Magnesium	Silicon	Iron	Manganese	Zinc	Ti and/or other Grain Refining Elements	Chromium	Remarks
19000	E1C	99.0 min	0.1	-	0.5	0.6	0.1	-	-	-	Ti + V = 0.07; Total impurities = 1.00
19500 19501	E1B E1E	99.5 min	0.05	-	0.3	0.4	0.05	-	-	-	Ti + V = 0.07; Total impurities = 0.50
52000	NE4	Remainder	0.1	1.7- 2.6	0.6	0.5	0.5	0.2	0.2	0.25	Cr + Mn = 0.5
53000	NE5	Remainder	0.1	2.8- 4.0	0.6	0.5	0.5	0.2	0.2	0.25	Cr + Mn = 0.5
63400	HE9	Remainder	0.1	0.4- 0.9	0.3- 0.7	0.6	0.3	0.2	0.2	0.1	
63401	E91E	Remainder	0.05	0.4- 0.9	0.3- 0.7	0.5	0.03	0.1	0.1	0.03	Others 0.03 each total 0.1
64430	HE30	Remainder	0.1	0.4- 1.2	0.6- 1.3	0.60	0.4- 1.0	0.1	0.2	0.25	
65032	HE20	Remainder	0.15- 0.4	0.7- 1.2	0.4- 0.8	0.7	0.2- 0.8	0.2	0.2	0.15- 0.35	Either Mn or Cr Shall be present
6061		Remainder	0.15- 0.4	0.8- 1.2	0.4- 0.8	0.7	0.15	0.25	0.15	0.04- 0.35	Others each 0.05 total 0.15
6005		Remainder	0.10	0.4- 0.6	0.6- 0.9	0.35	0.10	0.10	0.10	0.10	Others each 0.05 total 0.15
6060		Remainder	0.1	0.35- 0.6	0.3- 0.6	0.1- 0.3	0.1	0.15	0.1	0.5	Others each 0.05 total 0.15
6066		Remainder	0.7- 1.2	0.8- 1.4	0.9- 1.8	0.5	0.6- 1.1	0.25	0.2	0.4	Others each 0.05 total 0.15
64423		Remainder	0.5- 1.0	0.5- 1.3	0.7- 1.3	0.8	1.0	-	-	-	
6082		Remainder	0.10	0.6- 1.2	0.7- 1.3	0.50	0.40- 1.0	0.20	0.10	0.25	
3103		Remainder	0.1 max	0.3 max	0.5 max	0.7 max	0.9-1.5	0.2 max	0.2 max	0.1 max	0.1 Zr + Ti
24345		Remainder	3.8-5.0	0.2-0.8	0.5-1.2	0.7 max	0.3-1.2	0.2 max	0.3 max	0.3 max	
6262		Remainder	0.15-0.4	0.8-1.2	0.4-0.8	0.7 max	0.15 max	0.25 max	0.15 max	0.04-0.14	Bi: 0.4-0.7 & Pb: 0.4-0.7
7075		Remainder	1.2-2.0	2.1-2.9	0.4 max	0.5 max	0.3 max	5.1-6.1	0.2 max	0.18-0.28	0.25 Zr + Ti

*Note:- 1. *Titanium and / or other grain refining elements and / or Chromium may be present at the option of the supplier provided the total content does not exceed 0.3 percent.
2. Composition limits are in percent maximum unless shown otherwise.*