BUREAU OF INDIAN STANDARDS

AMENDMENT NO. 4 JUNE 2022

TO

IS 617 : 1994 CAST ALUMINIUM AND ITS ALLOYS INGOTS AND CASTINGS FOR GENERAL ENGINEERING PURPOSES - SPECIFICATION

(Third Revision)

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(*Page* 2, *Table* **1**) — Substitute the following for the existing table:

TABLE 1 CHEMICAL COMPOSITION OF CAST ALUMINIUM AND ITSALLOYS

(Clause 5.1)

Percent by mass (Values given are maximum unless shown otherwise)

Sl. No (1)	Designation (2)	Cu (3)	Si (4)	Mg (Max) (5)	Fe (Max) (6)	Mn (Max) (7)	Ni (Max) (8)	Zn (Max) (9)	Pb (Max) (10)	Sn (Max) (11)	Ti (Max) (12)	Cr (Max) (13)	Al (14)	Other elements (each) (Max) (15)	Others Total (Max) (16)
i.	1900	0.2	0.5	0.05	0.6	0.2	0.1	0.1	0.05	0.05	-	-	99.0 *Min*	-	-
ii.	1950	0.03	0.3	0.03	0.4	0.03	0.03	0.07	0.03	0.03	-	-	99.5 *Min*	-	-
iii.	2280	4.0-5.0	0.25	0.1	0.25	0.1	0.1	0.1	0.05	0.05	0.2-0.3	-	Remainder	-	-
iv.	2285 2)	3.5-4.5	0.7	1.2-1.8	0.7	0.6	1.7-2.3	0.1	0.05	0.05	0.2	-	Remainder	-	-
v.	2550	9.0-11.0	2.5	0.2-0.4	1.0	0.6	0.5	0.8	0.1	0.1	0.2	-	Remainder	-	-
vi.	4223	2.0-4.0	4.0-6.0	0.15	0.8	0.2-0.6	0.3	0.5	0.1	0.1	0.2	-	Remainder	-	-
vii.	4223A	2.8-3.8	4.0-6.0	0.05	0.6	0.2-0.6	0.2	40.15	0.1	0.05	0.2	-	Remainder	-	-
viii.	4225	1.0-1.5	4.5-6.0	0.3-6.0	0.8	0.5	0.3	0.5	0.2	0.1	0.2 3)	-	Remainder	-	-
ix.	4300	0.1	4.5-6.0	0.1	0.6	0.5	0.1	0.1	0.1	0.05	0.2	-	Remainder	-	-
x.	4323	3.0-5.0	5.0-7.0	0.1-0.3	1.0	0.2-0.6	0.3	2.0	0.2	0.1	0.2	-	Remainder	-	-
xi.	4420	3.0-4.0	7.5-9.5	0.3	1.3	0.5	0.5	3.0	0.3	0.2	0.2	-	Remainder	-	-
xii.	4420 A	3.0 -4.0	7.5 – 9.5	0.1	1	0.5	0.5	2.9	---	0.35	---	-	Remainder	-	0.50**
xiii.	4423	1.5-2.5	6.0-8.0	0.3	0.8	0.2-0.6	0.3	1.0	0.2	0.1	0.2	-	Remainder	-	-

xiv.	4450	0.1	6.5-7.5	0.20-0.45	0.5	0.3	0.1	0.1	0.1	0.05	0.2 3)	-	Remainder	-	-
xv.	4520	0.7-2.5	9.0-11.5	0.3	1.0	0.5	0.5	2.0	0.3	0.2	0.2	-	Remainder	-	-
xvi.	4520 A	1.5-3.5	9.6-12.0	0.3	1.0	0.5	0.5	1.0	0.2	0.2	0.3	0.1	Remainder	0.3	-
xvii.	4525	2.0-4.0	8.5-10.5	0.5-1.5	1.2	0.5	1.0	1.0	0.2	0.1	0.2	-	Remainder	-	-
xviii.	4525 A	2.0-4.0	8.0 – 11.0	0.1- 0.5	1.3	0.55	1	1.2	0.35*	0.25	0.25*	-	Remainder	0.05	0.25
xix.	4528	1.75-2.5	8.5-9.5	0.15	0.4-0.6	0.8	0.8	0.5	0.1	0.1	0.2	-	Remainder	-	-
xx.	4600	0.1	10.0-13.0	0.1	0.6	0.5	0.1	0.1	0.1	0.05	0.2	-	Remainder	-	-
xxi.	4600A	0.4	10.0-13.0	0.2	1.0	0.5	0.1	0.2	0.1	0.1	0.2	-	Remainder	-	-
xxii.	4628	1.75-2.5	11.0-12.5	0.3	0.7-1.1	0.5	0.3	1.5	0.05	0.1	0.2	-	Remainder	-	-
xxiii.	4635	0.1	10.0-13.0	0.2-0.6	0.6	0.3-0.7	0.1	0.1	0.1	0.05	0.2	-	Remainder	-	-
xxiv.	4652	0.7-1.5	10.0-12.0	0.8-1.5	1.0	0.5	0.7-1.5	0.5	0.1	0.1	0.2	-	Remainder	-	-
xxv.	5230	0.1	0.3	3.0-6.0	0.6	0.3-0.7	0.1	0.1	0.05	0.05	0.2	-	Remainder	-	-
xxvi.	5500	0.1	0.25	9.5-11.0	0.4	0.1	0.1	0.1	0.05	0.05	0.2	-	Remainder	-	-

NOTES

1. Designations shall be as given in IS 6051.
2. Chromium content in this alloy shall not exceed 2 percent.
3. Titanium content, if present, shall be not less than 0.05 percent.
4. Other impurities do not preclude the possible presence of other unnamed elements. However analysis shall regularly be made only for the impurities listed in the table. The major element (Aluminium) shall be determined by difference between the sum of total elements analysed (& permitted within maximum limits) and 100 percent. By agreement between manufacturer and purchaser, analysis may be required and limits established for elements not specified.
5. '*' If required by the purchaser only and in such case, the limits shall be as per the agreement between purchaser and the supplier and the maximum limits shall be as specified in the table.
6. '**' Sum of all other elements each having value of 0.010% or more.'