

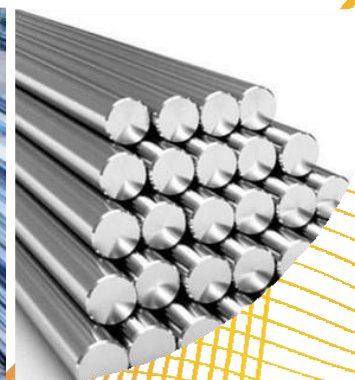


COMPENDIUM OF INDIAN STANDARDS ON

ALUMINIUM AND ALUMINIUM ALLOYS PRODUCTS

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Foreword

This compendium gives a list and brief description of the various raw materials, products and test methods standards formulated by BIS on Aluminium. These standards have been formulated by MTD 07-Ores and Feed Stock for Aluminium Industry, its Metals/ Alloys and Products Sectional Committee.

A. INDIAN STANDARDS FOR PRIMARY ALUMINIUM AND ALUMINIUM ALLOYS

1. **IS 11890 : 1987 (Reaffirmed in March, 2022) - Specification for high purity primary aluminium ingots for remelting for special applications**
This standard covers the requirements for 99.95 , 99.90, 99.85 and 99.80 percent primary aluminium ingots for remelting for special applications.
2. **IS 11998 : 1987 (Reaffirmed in March, 2022) - Specification for aluminium for the manufacture of alloys for I.C. engine pistons.**
This standard covers the requirement of EC grade aluminium ingots which are used for making alloys for the manufacture of automotive pistons of two grades (eutectic and hyper-eutectic) for I.C. engines conforming to IS 7793-1975.
3. **IS 1253 : 1992 (Reaffirmed in March, 2022) - Aluminium for use in iron and steel manufacture – specification.**
This standard covers the requirements for aluminium in the form of shot, notch bar and 'any other shape suitable for use in the manufacture of iron and steel.
4. **IS 202 : 1981 (Reaffirmed in March, 2022) - Specification for Aluminium Casting Alloy Ingots and Castings for Aircraft Purposes**
This standard covers the specific requirements for each of the aluminium base alloy ingots and castings (depending on the method of manufacture) for aircraft purposes.
5. **IS 2047 : 1992 (Reaffirmed in March, 2022) - Aluminium alloy hardeners (Master alloys)**
This standard covers the requirements for aluminium alloy hardeners used in the manufacture of aluminium alloys.
6. **IS 23 : 1980 (Reaffirmed in March, 2022) - Specification for Primary Aluminium Ingots for Remelting for Aircraft Purposes**
This standard covers requirements for 99, 99.5, 99.7 and 99.8 percent primary aluminium notched bars and ingots for remelting, for aircraft purposes.
7. **IS 2590 : 1987 (Reaffirmed in March, 2022) - Primary aluminium ingots for remelting for general engineering purposes.**
This standard covers the requirements for 99.7, 99.6, 99.5 and 99.0 percent primary aluminium ingots for remelting purpose.
8. **IS 6751 : 2025 - Aluminium Alloy Castings and Strips for Bearings - Specification (First Revision)**
This standard covers requirements of aluminium alloys in cast and rolled form for bearing used in automobile and other engineering applications.
9. **IS 6754 : 1972 (Reaffirmed in January, 2025) - Specification for Aluminium Alloy Ingots for Bearings**
This standard specifies the requirements for aluminium alloy ingots for bearings.
10. **IS 7793 : 1975 (Reaffirmed in March, 2022) - Aluminium alloys for IC engine pistons**
This standard prescribes requirements for aluminium alloys used for the manufacture of pistons employed for internal combustion engines of all types.
11. **IS 4026 : 2023 - Aluminium Ingots, Billets and Wire Bars (EC GRADE)**
This standard covers the requirements of four EC grades of aluminium ingots, billets and wire bars.
12. **IS 5484 : 2023 - EC Grade Aluminium Rod Produced by Continuous Casting and Rolling – Specification**
This standard covers the requirements for electrical conductor (EC) Grade aluminium redraw rods, between 6.5 mm to 15 mm in nominal diameter, produced by continuous casting and rolling for electrical conductors, cables and winding wires.
13. **IS 617 : 2024 : Aluminium and Aluminium Alloys Ingots for Remelting and Castings for General Engineering Purposes – Specification**

This standard covers the requirements of aluminium and its alloys in form of ingots for remelting and castings for general engineering purposes.

NOTE - Standard specifies the chemical composition of ingots, chemical composition of castings and mechanical properties of separately cast test bar of castings.

14. IS 202 : 1981 (Reaffirmed in March, 2022) : Specification for aluminium casting alloy ingots and castings for aircraft purposes (Third Revision)

This standard covers the specific requirements for each of the aluminium base alloy ingots and castings (depending on the method of manufacture) for aircraft purposes.

B. INDIAN STANDARD FOR SECONDARY AND WROUGHT ALUMINIUM AND ALUMINIUM ALLOYS

1. **IS 16011 : 2012 (Reaffirmed in March, 2022) - Aluminium and aluminium alloy foil for pharmaceutical packaging – specification** *This standard covers the requirements of aluminium and aluminium alloy-bare / coated / laminated foil for pharmaceutical packaging applications. It is applicable for 0.020 mm (20 Å µm) to 0.040 mm (40 Å µm) foil thicknesses.*
2. **IS 16012 : 2012 (Reaffirmed in March, 2022) Poly-laminated aluminium cable wrap – specification** *This standard covers the requirements of poly laminated aluminium cable wrap.*
3. **IS 10257 : 1982 (Reaffirmed in January, 2025) - Aluminium foil stock** *This standard covers the requirements of wrought aluminium foil stock.*
4. **IS 14712 : 1999 (Reaffirmed in January, 2025) - Wrought Aluminium and Its Alloys - Chequered/tread Sheets for General Engineering Purposes – Specification** *This standard covers the requirement of wrought aluminium alloy chequered/tread sheet having base thickness 0.80 to 3.50 mm with following four patterns:
a.)Diamond, b.)Single bar, c.) Two bar, and d.) Five bar.*
5. **IS 15392 : 2003 (Reaffirmed in March, 2022) Aluminium and Aluminium Alloy Bare Foil for Food Packaging – Specification** *This standard covers the requirements of annealed aluminium and aluminium alloy bare foil for food packaging. It is applicable for 0.011 mm (11 µm) to 0.075 mm (75 µm)thickness.*
6. **IS 2067 : 1975 (Reaffirmed in March, 2022) - Wrought aluminium wire for electrical purposes** *This standard covers the requirements of aluminium wire for electrical conductors, and specifies the chemical composition ,mechanical properties, electrical resistivity, and other general requirements.*
7. **IS 21 : 2025 - Wrought Aluminium and Aluminium Alloys for Manufacture of Utensils - Specification (Fifth Revision)** *This standard covers the requirements for wrought aluminium and aluminium alloys used for manufacture of utensils. 1.2 The material may be supplied in the form of sheet, strip, plates, circles, ovals or in other shapes in flat form. 1.3 This standard specifies the grades, maximum contents of alloying elements and impurities in wrought aluminium and aluminium alloys for use in contact with foodstuff applications.*
8. **IS 3436 : 1978 (Reaffirmed in March, 2022) Aluminium clad aluminium alloy sheet and strip for aircraft purposes (Alloy 24345)** *This standard covers the requirements of aluminium-clad aluminium-copper-magnesium-silicon-manganese alloy sheet, strip and coil for aeronautical applications.*
9. **IS 5082 : 1998 (Reaffirmed in March, 2022) - Wrought aluminium and aluminium alloy bars, rods, tubes and sections for electrical purposes** *This standard specifies requirements for wrought aluminium and aluminium alloy bars, rods, tubes, sections, plates and sheets for electrical applications, prescribing their chemical composition, mechanical properties and electrical resistivity/conductivity This standard is applicable to
a. extruded bars and rods above 6 mm diameter; extruded angles, channels, other sections and profiles including tubes, hollow sections of thickness, 3 mm and above.
b. rolled - plates, sheets of 3 mm and above thickness.*
10. **IS 7092 Part 1 1992 (Reaffirmed in March, 2022) - Aluminium Alloy Tubes for Irrigation Purposes - Specification - Part 1 Welded Tubes** *This standard covers the requirement of Electric resistance welded aluminium alloy tubes used for irrigation (including sprinkler irrigation) purposes and suitable for a maximum working pressure of 1000 kN/m² (10 kgf/cm²) for diameters up to and including 200 mm.*

11. **IS 7092 Part 2 1987 (Reaffirmed in March, 2022) - Specification for Aluminium Alloy Tube for Irrigation Purposes - Part 2 Extruded Tube** *This standard (Part 2) covers the requirement of extruded aluminium alloy tubes used for irrigation purposes and suitable for a maximum working pressure of 1000 kN/m² (10kgf/cm²) for diameters up to and including 200 mm.*
12. **IS 733 : 1983 (Reaffirmed in March, 2022) - Specification for Wrought Aluminium and Aluminium Alloy Bars, Rods and Sections (for General Engineering Purposes)** *This standard covers requirements for wrought aluminium and aluminium alloy bars, rods and sections for general engineering purposes.*
13. **IS 734 : 1975 (Reaffirmed in March, 2022) - Wrought aluminium and aluminium alloys, forging stock and forgings for general engineering purposes** *This standard covers requirements for forging stock and forgings of aluminium and aluminium alloys in various conditions for general engineering purposes.*
14. **IS 736 : 1986 (Reaffirmed in March, 2022) - Wrought aluminium and aluminium alloy plate for general engineering purposes** *This standard covers the requirements for wrought aluminium and aluminium alloy plates for general engineering purposes.*
15. **IS 738 : 1994 (Reaffirmed in February, 2020) - Wrought aluminium alloys, drawn tube for general engineering purposes** *This standard covers the requirements of wrought aluminium and aluminium alloy drawn tubes of round cross-section for general engineering purposes.*
16. **IS 739 : 1992 (Reaffirmed in March, 2022) - Wrought aluminium and aluminium alloy wire for general engineering purposes** *This standard covers the requirements for wrought aluminium and aluminium alloy wire for general engineering purposes.*
17. **IS 740 : 1977 (Reaffirmed in March, 2022) - Wrought aluminium and aluminium alloy rivet stock for general engineering purposes** *This standard covers requirements for wrought aluminium and aluminium alloys rivet stock for general engineering purposes.*
18. **IS 7428 : 1974 (Reaffirmed in March, 2022) - Aluminium alloy extruded bars, rods and sections (for aircraft purposes) (Alloy 24345)** *This standard covers the requirements of the following two grades of aluminium-copper-magnesium-silicon-manganese alloy extruded bars, rods and sections*
 - i. *Grade I - Extruded bars, rods and sections (for general applications)*
 - ii. *Grade II - Extruded bars, rods and sections for highly stressed applications*
19. **IS 7670 : 2002 (Reaffirmed in March, 2022) - Aluminium Alloy Forging Stock and Forgings (for Parts Operated at Elevated Temperatures) for Aircraft Purposes (Alloy 22588) – Specification** *This standard covers the requirements of aluminium-copper-magnesium-nickel-iron alloy (Alloy 22588) forging stocks (billets, bars, rods, sections) and forgings. The materials intended for parts operating at elevated temperatures.*
20. **IS 7882 : 1975 (Reaffirmed in January, 2025) - Aluminium alloy sheet and strip for aircraft purposes (Alloy 19000)** *This standard covers the requirements for 99 percent pure aluminium sheet and strip used for aircraft purposes.*
21. **IS 7883 : 1975 (Reaffirmed in January, 2025) - Aluminium-manganese sheet and strip for aircraft purposes (Alloy 31000)** *This standard covers the requirements for aluminium-manganese alloy sheet and strip used for fabrication of aircraft components.*
22. **IS 7902 : 2001 (Reaffirmed in March, 2022) - Aluminium Alloy Forging Stock and Forgings (Alloy 24345) for Aerospace Applications – Specification** *This standard covers the requirements of aluminium - copper -magnesium - silicon - manganese alloy (Alloy 24345) forging stocks (billets, bars, rods, sections) and forgings. The material is intended primarily for aircraft structural parts requiring moderate strength.*
23. **IS 8513 : 1977 (Reaffirmed in January, 2025) - Aluminium alloy wire for cold forged rivets for aircraft purposes (Alloy 55000)** *This standard covers the requirements of drawn aluminium magnesium alloy wire used for cold forging of rivets for aircraft purposes.*
24. **IS 8514 : 1977 (Reaffirmed in January, 2025) - Aluminium alloy wire for cold forged rivets for aircraft purposes (Alloy 24530)** *This standard covers the requirements of drawn aluminium-copper-magnesium alloy wire used for cold forging of rivets for aircraft purposes.*
25. **IS 8515 : 1977 (Reaffirmed in January, 2025)- Specification for Aluminium Wire for Cold Forged Rivets for Aircraft Purposes (Alloy 19500)** *This standard covers the requirements of drawn aluminium wire for manufacturing rivets for aircraft purposes.*

26. **IS 8560 : 1977 (Reaffirmed in January, 2025) - Aluminium clad aluminium alloy sheet and strip for aircraft purposes (Alloy 24530)** *This standard covers the requirements of aluminium coated aluminium-copper-magnesium-manganese alloy sheets, strips and coils for aeronautical applications.*
27. **IS 8561 : 1977 (Reaffirmed in January, 2025) - Aluminium alloy clad sheet and strip for aircraft purposes (Alloy 76528)** *This standard covers the requirements for aluminium alloy clad aluminium-zinc-magnesium-copper-chromium alloy sheet and strip for aeronautical applications.*
28. **IS 8936 : 1978 (Reaffirmed in March, 2022) - Aluminium alloy for wire for cold forged rivets for aircraft purposes (Alloy 24350)** *This standard covers the requirements of aluminium-copper-magnesium-manganese alloy wire used for cold forging of rivets for aircraft purposes.*
29. **IS 8937 : 1978 (Reaffirmed in January, 2025) - Aluminium alloy wire for cold forged rivets for aircraft purposes (Alloy 22500)** *This standard covers the requirements of aluminium-copper-magnesium alloy wire used for cold forging of rivets for aircraft purposes.*
30. **IS 8938 : 1978 (Reaffirmed in March , 2025)- Aluminium alloy wire for cold forged rivets for aircraft purposes (Alloy 24345)** *This standard covers the requirements of aluminium-copper-magnesium-silicon-manganese wire used for cold forging of rivets for aircraft purposes.*
31. **IS 9612 : 1980 (Reaffirmed in March , 2022) - Aluminium tubes for refrigeration purposes** *This standard covers the requirements of aluminium tubes for refrigeration purposes, suitable for a maximum working pressure of 1.7 kPa (170N/cm²),*
32. **IS 1285 : 2023 - Wrought Aluminium and Aluminium Alloys - Extruded Round Tube and Hollow Sections for General Engineering Purposes – Specification** *This standard covers the requirements for wrought aluminium and aluminium alloy extrude round tubes and hollow sections for general engineering purposes.*
33. **IS 9997 : 2023 - Aluminium Alloy Redraw Rods for Electrical Purposes – Specification** *This standard specifies the requirements for aluminium alloy redraw rods for electrical purposes 7.6 mm and 9.5 mm in nominal diameter. However, this standard can be used for aluminium alloy redraw rods and wires of other diameters also.*
34. **IS 1284 : 2024 - Wrought Aluminium Alloy Bolt and Screw Stock (for General Engineering Purposes) — Specification** *This standard covers the requirements of wrought aluminium alloy, bolt and screw stock in various tempers.*
35. **IS 737 : 2024 - Wrought Aluminium and Aluminium Alloy Sheet and Strip for General Engineering Purposes – Specification** *This standard covers the requirements for wrought aluminium and aluminium alloy sheet and strip for general engineering purposes.*
36. **IS 1254 : 2007 (Reaffirmed in March , 2022) - Corrugated aluminium sheet** *- This standard specifies the material, profile dimensions and finish for the corrugated aluminium sheets meant for following uses: General purpose; Industrial; Building; and High stiffness industrial sheet.*

C. INDIAN STANDARDS ON TEST METHODS

Test Method Name	IS No.
Brinell Hardness Test	IS 1500 (Part 1) : 2019/ISO 6506-1 : 2014
Tensile Testing	IS 1608 (Part 1) : 2022/ISO 6892-1 : 2019
Tension Testing	IS 1599 : 2023
Flattening Test	IS 2328 :2018
Drift Expanding Test	IS 2335 :2005
Rockwell Hardness Test	IS 1586 (Part 1) : 2018/ISO 6508-1 : 2016
Methods for Chemical Analysis	IS 504 : 1963

D. STANDARDS FOR INSPECTION, CODE OF PRACTICE, DESIGNATION AND CLASSIFICATION

1. **IS 6051 : 1970 (Reaffirmed in January, 2025)** - Code for designation of aluminium and its alloys
2. **IS 11804 : 1986 (Reaffirmed in March , 2022)** - Code of practice for manufacture of aluminium alloy pressure die castings
3. **IS 2479 : 1981 (Reaffirmed in March , 2022)** - Colour code for the identification of aluminium and aluminium alloys for general engineering purposes .
4. **IS 2304:1962 (Reaffirmed in March , 2022)** - Procedure for inspection and testing of light metals (Aluminium And Magnesium) and their alloy ingots and castings for aircraft purposes
5. **IS 2066 (Part 1) : 2024** - Coding and classification for non - Ferrous scrap metals and residues.
6. **IS 3704 : 1966 (Reaffirmed in March , 2022)** - Methods for sampling of light metals and their alloy products
7. **IS 10259 : 1982 (Reaffirmed in March , 2022)** - General conditions for delivery and inspection of aluminium and aluminium alloy products
8. **IS 3420 : 1976 (Reaffirmed in March , 2022)** - Procedure for inspection and testing of aluminium alloy sheets and strips for aircraft purposes.
9. **IS 5047 Part 1 1986 (Reaffirmed in March , 2022)** - Glossary of Terms Relating to Aluminium Alloys - Part 1 Unwrought and Wrought.
10. **IS 7429 : 1974 (Reaffirmed in March , 2022)** - Procedure for inspection and testing of aluminium and aluminium alloy extruded bars, rods and sections (for aircraft purposes)
11. **IS 7674 : 1975 (Reaffirmed in March , 2022)** - Procedure for inspection and testing of aluminium and aluminium alloy forging stock and forgings for aircraft purposes
12. **IS 8474 : 1977 (Reaffirmed in March , 2022)** - Procedure for inspection and testing of aluminium and aluminium alloy wires (for rivets) for aircraft purposes.
13. **IS 5047 Part 2 1979 (Reaffirmed in March , 2022)** - Glossary of Terms Relating to Aluminium and Aluminium Alloys - Part II Plant and Operations, Thermal Treatment, Control and Testing, Finishing
14. **IS 5047 Part 3 1979 (Reaffirmed in March , 2022)** - Glossary of Terms Relating to Aluminium and Aluminium Alloys - Part III Geometrical Properties and Tolerance, Structural and Surface Defects
15. **IS 5052 : 1993 (Reaffirmed in March , 2022)** - Aluminium and its Alloys - Temper Designations (Second Revision)

E. STANDARDS FOR DIMENSION, TOLERANCE AND SHAPES

1. **IS 2525 : 1982 (Reaffirmed in March , 2022)** - Dimensions for wrought aluminium and aluminium alloys, wire
2. **IS 2673 : 2002 (Reaffirmed in March , 2022)** - Dimensions for Wrought Aluminium and Aluminium Alloys Extruded Round Tube – Specification.
3. **IS 2676 : 1981 (Reaffirmed in March , 2022)** - Dimension for wrought aluminium and aluminium alloy sheet and strip
4. **IS 2677 : 1979 (Reaffirmed in March , 2022)** - Dimensions for wrought aluminium and aluminium alloys, plates and hot rolled sheets.
5. **IS 2678 : 1987 (Reaffirmed in March , 2022)** - Dimensions and tolerances for wrought aluminium and aluminium alloy drawn round tube
6. **IS 3577 : 1992 (Reaffirmed in March , 2022)** - Wrought aluminium and aluminium alloys rivet, bolt and screw stock - Dimensions and tolerances
7. **IS 3965 : 1981 (Reaffirmed in March , 2022)** - Dimensions for wrought aluminium and aluminium alloy bar, rod and section.
8. **IS 6477 : 1983 (Reaffirmed in March , 2021)** - Dimensions for wrought aluminium and aluminium alloys, extruded hollow section.
9. **IS 1820 : 1979 (Reaffirmed in March , 2022)** - Recommended shapes and sizes for aluminium notched bars and ingots for remelting purposes.

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