



PUBLISHED STANDARD

AS 1:2026

**SPECIFICATION FOR BIM-READY
MANUFACTURER PRODUCT DATA**

First Edition

Published by Aayaam

July 2026

© 2026 AAYAAM. ALL RIGHTS RESERVED.

aayaam.thezariya.com · Part of The Zariya Collective

Copyright and use

AS 1:2026, Specification for BIM-ready manufacturer product data. First Edition, July 2026.

© 2026 Aayaam. All rights reserved.

AS 1:2026, the conformance designations "AS1 Compliant", "AS1 Verified", "AS1 Certified" and "AS1 Advanced", and the Aayaam Classification Code are designations of Aayaam.

This document may be downloaded, printed and shared, free of charge, in complete and unaltered form for reference and non-commercial use. No part of it may be modified, sold, or excerpted in a way that changes its meaning, and no person may claim conformance to it, or display a conformance mark, except as set out in clause 8.3 and with written permission from Aayaam.

Edition 1 of this standard is published by Aayaam alone. It is not an official standard of the Bureau of Indian Standards, the Ministry of Housing and Urban Affairs or any other government or standards body. Sections 9 and 10 describe its governance path and its intended relationship to any future official Indian standard.

Referenced third-party works, including ISO 16739-1, ISO 19650, ISO 12006-2, IS 1893, Uniclass 2015 and the Bureau of Energy Efficiency Star Labelling Programme, are the property of their respective owners. They are cited for reference and cross-mapping only. Uniclass 2015 is referenced under the terms of its free-to-use licence.

This document is provided "as is". Conformance to it is a statement about a digital object and does not certify the physical performance, safety or regulatory status of any product (see clause 1.4). To the extent permitted by law, Aayaam accepts no liability for decisions made in reliance on it.

Document control

ITEM	DETAIL
Designation	AS 1:2026
Title	Specification for BIM-ready manufacturer product data
Edition	First Edition
Date of issue	July 2026
Publisher	Aayaam, part of The Zariya Collective
Next review	No later than 24 months from issue, or at the next IFC major version release, whichever is sooner (clause 9.4)
Contact	info.zariya.services@gmail.com · WhatsApp +91 74396 51029

Contents

	Foreword
1	Scope
2	Normative references
3	Terms and definitions
4	Conformance levels
5	Geometric requirements
6	Data and classification requirements
7	File format and interoperability
8	Verification and certification
9	Governance and version control
10	Relationship to national and international frameworks
A	Annex A: Minimum Property Set (Level 1)
B	Annex B: Conformance Level Summary

Foreword

This standard has been developed by Aayaam to address a specific and, until now, unfilled gap in Indian construction practice: the absence of a published, India-specific specification for manufacturer-authored Building Information Modeling (BIM) objects.

Indian BIM projects presently reference international frameworks directly — ISO 19650 for information management, IFC (ISO 16739-1:2024) for data exchange, and, by convention rather than by design, the United Kingdom's Uniclass 2015 for classification, since no Indian classification system has been published to date. This standard does not seek to replace or duplicate any of these frameworks. It occupies the specific space they do not: a testable specification for what a manufacturer's product must actually contain, structurally and informationally, before it is genuinely usable inside a coordinated BIM project — not merely present in it as a 3D shape.

This is Edition 1. It is authored, at this stage, solely by Aayaam. Section 9 sets out the governance path by which it is intended to become a multi-stakeholder instrument over time, and Section 10 addresses its relationship to any future official Indian standard explicitly and without ambiguity.

1 Scope

- 1.1** This standard specifies requirements for the geometric, informational, and classification content of manufacturer-authored BIM objects intended for use on Indian construction projects.
- 1.2** This standard applies to discrete manufactured products incorporated into a building or civil asset — including, but not limited to, mechanical, electrical, plumbing, and fire-life-safety equipment; sanitaryware; joinery and fit-out components; façade and glazing systems; and finishes.
- 1.3** This standard does not specify requirements for project-level BIM execution planning, information management, or common data environment governance. These matters are addressed by ISO 19650 (all parts) and fall outside this standard's scope.
- 1.4** This standard does not certify the physical performance, safety, or regulatory status of a manufacturer's product. Where a product carries a BIS licence, ISI mark, or BEE star rating, this standard requires that valid certification data be correctly represented within the object — it does not itself test or certify the underlying product.

2 Normative references

The following are referred to in this standard. For dated references, only the edition cited applies. For undated references, the latest edition applies.

- ISO 16739-1:2024, Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries — Part 1: Data schema (buildingSMART International)

- ISO 19650 (Parts 1–5), Organization and digitization of information about buildings and civil engineering works, including building information modelling — Information management using building information modelling
- ISO 12006-2:2015, Building construction — Organization of information about construction works — Part 2: Framework for classification
- Uniclass 2015, published and maintained by NBS Enterprises Ltd — referenced for cross-mapping purposes only, under the terms of its free-to-use licence
- IS 1893 (Part 1), Criteria for Earthquake Resistant Design of Structures, Bureau of Indian Standards — referenced where seismic-zone suitability metadata applies
- Bureau of Energy Efficiency Star Labelling Programme, Ministry of Power, Government of India — referenced where energy-performance metadata applies

3 Terms and definitions

- 3.1** BIM-Ready Object: a digital representation of a manufactured product that satisfies, at minimum, the Level 1 requirements of Section 4.
- 3.2** Level of Information Need (LOIN): the framework defined by ISO 19650 describing the geometrical, alphanumerical, and documentary information required for a given object, purpose, milestone, and actor. This standard uses LOIN in place of legacy "Level of Development" (LOD) numerical scales, which are not adopted here.
- 3.3** Aayaam Classification Code (ACC): the classification identifier assigned to an object under Section 6.2 of this standard.
- 3.4** Conformance Level: one of the four levels defined in Section 4, describing the depth of compliance an object has achieved.
- 3.5** Verification: the process defined in Section 8 by which Aayaam confirms an object's conformance to a stated level.

4 Conformance levels

- 4.1** This standard defines four conformance levels. Each level is cumulative: an object cannot achieve a given level without satisfying every requirement of the levels below it.
- 4.2** Level 1 — AS1 Compliant. The baseline for any object accepted into an Aayaam-hosted listing. Requires: valid IFC 4.3 export or documented native-format equivalent; correct units, origin, and orientation; an assigned Aayaam Classification Code; and the minimum Property Set defined in Annex A.
- 4.3** Level 2 — AS1 Verified. Requires Level 1, plus: independently tested import into no fewer than two BIM authoring platforms and one IFC viewer; parametric behaviour for all applicable dimensional variants; and geometry authored within the budgets of Section 5.4.
- 4.4** Level 3 — AS1 Certified. Requires Level 2, plus: complete regulatory and compliance metadata under Section 6.3 where applicable to the product category; a documented

maintenance and lifecycle data set suitable for facilities-management handover; and successful re-verification at the cadence set out in Section 8.4.

- 4.5** Level 4 — AS1 Advanced. Requires Level 3, plus: a live data connection, or a documented protocol for one, permitting the object to represent real-time or periodically updated operational data within a digital twin; and circularity metadata under Section 6.4.

5 Geometric requirements

- 5.1** Geometric requirements are expressed using the ISO 19650 Level of Information Need framework: Object (what is being modelled), Purpose (why), Milestone (at what project stage), and Actor (for whom).
- 5.2** All objects shall be modelled using native parametric geometry appropriate to the authoring platform. Imported or "dumb" mesh geometry without editable parameters does not satisfy this standard at any level.
- 5.3** Repeated sub-components within a single object (fixings, hardware, repeated modular elements) shall be instanced. Each unique instance shall not be separately duplicated as distinct geometry.
- 5.4** Objects shall be authored within the following indicative budgets, so that they remain usable in real-time visualization and VR/AR contexts without requiring the specifier to re-optimize geometry before use: simple product types (fixtures, fittings, hardware) should not exceed 15,000 triangles at the highest level of detail; complex or parametric equipment (MEP plant, curtain-wall systems) should not exceed 50,000 triangles. Budgets are reviewed at each edition of this standard as hardware and rendering technology evolve.
- 5.5** Each object shall include, at minimum, two levels of geometric detail: a simplified representation suitable for early-stage massing and coordination, and a detailed representation suitable for construction documentation and clash detection.

6 Data and classification requirements

6.1 Property Sets

- 6.1.1** Each object shall carry IFC-standard Property Sets applicable to its IFC entity type, plus the Aayaam-defined supplementary Property Set specified in Annex A where standard IFC Property Sets do not capture information required by this Section.

6.2 Aayaam Classification Code (ACC)

- 6.2.1** Every object shall be assigned an ACC. The ACC structure is aligned with ISO 12006-2:2015 and is cross-mapped to the Products (Pr) table of Uniclass 2015, to preserve interoperability with projects that reference Uniclass directly.

- 6.2.2 The ACC extends beyond a direct translation of Uniclass by introducing category granularity for product types disproportionately common in Indian construction and under-represented in Uniclass's UK-authored structure.
- 6.2.3 The full ACC table is maintained and published separately from this document and is revised under the governance process of Section 9.

6.3 Regulatory & Compliance Metadata

- 6.3.1 Where applicable to the product category, each object shall carry: (a) BIS licence number and applicable IS code reference, where the product falls under a mandatory BIS certification scheme; (b) BEE star rating and rating validity period, where the product falls under the Bureau of Energy Efficiency labelling programme; and (c) seismic-zone suitability data, cross-referenced to the zones defined in the current edition of IS 1893 (Part 1) — including Zone VI, introduced in the 2025 revision to cover the full Himalayan arc — where structurally or functionally relevant to the product category.

6.4 Lifecycle & Circularity Metadata (Level 4 only)

- 6.4.1 Recyclability, disassembly, and material-passport data, where available from the manufacturer.

7 File format and interoperability

- 7.1 Every object shall be exportable in IFC 4.3 (ISO 16739-1:2024) format. Where a manufacturer's authoring pipeline does not yet support IFC 4.3 export, IFC4 ADD2 TC1 is an acceptable interim format, with migration to IFC 4.3 required at the object's next scheduled re-verification.
- 7.2 Every object shall be validated using the buildingSMART IFC Validation Service, or an equivalent tool accepted by Aayaam, prior to listing.
- 7.3 Every object at Level 2 and above shall be tested for correct import into no fewer than two of the following: Autodesk Revit, Graphisoft ArchiCAD, and an open-source IFC viewer such as BIMvision or equivalent.

8 Verification and certification

- 8.1 Level 1 conformance is assessed by Aayaam through documentation and file review.
- 8.2 Level 2 and above conformance is assessed by Aayaam through direct, hands-on testing in the platforms specified in Section 7.3.
- 8.3 A conformance mark ("AS1 Compliant," "AS1 Verified," "AS1 Certified," or "AS1 Advanced," as applicable) is issued on successful verification and may be displayed by the manufacturer in connection with the specific, named object it applies to — not as a blanket claim across an entire product range.
- 8.4 Objects shall be re-verified no less frequently than every 24 months, or immediately upon a change to the underlying product's specification, whichever is sooner.

9 Governance and version control

- 9.1 This edition (AS 1:2026) is authored by Aayaam.
- 9.2 As adoption grows, Aayaam intends to constitute a Technical Committee including practising architects, manufacturer representatives, and liaison contacts from relevant industry bodies, to guide future editions. This is a stated intention for this edition, not a present governance structure, and is disclosed as such.
- 9.3 Revisions will be published under a Major:Minor numbering convention (for example, AS 1:2026 → AS 1.1:2027 for a minor amendment; AS 2:20XX for a substantive revision). Proposed changes will be published with a comment period of no less than 60 days before adoption.
- 9.4 This standard will be reviewed no less frequently than every IFC major version release, or every 24 months, whichever is sooner.

10 Relationship to national and international frameworks

- 10.1 This standard is designed to be complementary to ISO 19650, IFC, and Uniclass 2015 — not a replacement for any of them.
- 10.2 Should the Bureau of Indian Standards, the Ministry of Housing and Urban Affairs, or another appropriate national body publish an official Indian BIM classification or object standard, Aayaam intends to harmonize the Aayaam Classification Code with that standard and will publish a mapping between the two within one revision cycle.

A Annex A — Minimum Property Set (Level 1)

Normative. Applies to every object at every conformance level; conditional fields apply only where relevant to the product category.

FIELD	IFC PROPERTY SET REFERENCE	DATA TYPE	STATUS
Manufacturer name	Pset_ManufacturerTypeInfo	Text	Mandatory
Product code / model	Pset_ManufacturerTypeInfo	Text	Mandatory
Aayaam Classification Code	Aayaam supplementary Pset	Text	Mandatory
IFC entity type	Native IFC attribute	Enumeration	Mandatory
Warranty period	Pset_Warranty	Duration	Mandatory
BIS licence no. / IS reference	Aayaam supplementary Pset	Text	Conditional
BEE star rating & validity	Aayaam supplementary Pset	Integer + Date	Conditional
Seismic-zone suitability	Aayaam supplementary Pset	Enumeration	Conditional

B Annex B — Conformance Level Summary

Informative quick-reference. Section 4 is the normative text; this table summarizes it.

LEVEL	ADDS	ASSESSED BY
AS1 Compliant	Valid IFC export, units/origin correct, ACC assigned, minimum Pset	Documentation & file review
AS1 Verified	Tested import (2 platforms + viewer), parametric behaviour, geometry budget	Hands-on testing
AS1 Certified	Full regulatory metadata, FM-ready lifecycle data, re-verification cadence	Hands-on testing + audit
AS1 Advanced	Live/periodic data connection, circularity metadata	Hands-on testing + audit

— END OF AS 1:2026, FIRST EDITION —
© 2026 Aayaam. All rights reserved.