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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46848.6-2025

**Technical product documentation - Product design data
management requirements - Part 6: Product structure
management**

技术产品文件 产品设计数据管理要求 第6部分：产品结构管理

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 6 of GB/T 46848 "Requirements for the Management of Technical Product Documentation and Product Design Data". GB/T 46848 has been... The following sections were published.

1.General Provisions;

2.Numbering Principles;

3.Basic Procedures;

4.Access Control;

5.Document Management;

6.Product Structure Management;

7.Approval and Issuance;

8.Change Management;

9.Storage and Maintenance. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Technical Product Documentation (SAC/TC146). This

document was drafted by: Shandong Shanda Huatian Software Co., Ltd., China Machinery Productivity Promotion Center Co., Ltd., and China Aero Engine Corporation Xi'an Branch. Power Control Technology Co., Ltd., Beijing Aerospace Systems Engineering Research Institute, CRRC Dalian Locomotive & Rolling Stock Co., Ltd., CRRC Zhuzhou Electric Locomotive Co., Ltd. Limited Liability Company, SAIC-GM-Wuling Automobile Co., Ltd., XCMG Construction Machinery Co., Ltd., China Machinery Research Institute of Standards and Technology (Beijing) Co., Ltd. The main drafters of this document are. Qu Yaning, Qiu Huihui, Pan Kanghua, Zhang Xiaolu, Wang Yu, Zhao Bo, Pi Zan, Wang Hong, Zhang Lichen, and Gan Yutian. Li Junping, Wu Rui, Zhao Zhenglong, Gao Hongwei.

With the gradual application and promotion of 3D computer-aided design (CAD) technology, and the application of model-defined design (MBD) technology in manufacturing... Within enterprises, 3D digital models have gradually replaced 2D engineering drawings, becoming the core data carrier in the product development process. This shift... This change not only reflects the evolution of technological forms, but also signifies a profound transformation in product design methodologies and management models. Because 3D models are crucial in technological information... The data management and document control methods differ significantly from the traditional two-dimensional model in terms of information expression, data organization structure, and collaborative management. The process also faces systemic restructuring. To adapt to the development approach centered on 3D digital models, this system addresses the bottlenecks in product design data management within a 3D environment. The problem is to promote the popularization and engineering application of model-based definition technology, support the digital transformation and upgrading of my country's manufacturing industry, and formulate... GB/T 46848 "Requirements for the Management of Product Design Data in Technical Product Documentation". GB/T 46848 is based on the entire lifecycle of product design data. The management process is planned to consist of nine parts.

1.General Provisions. The purpose is to stipulate the general rules for the classification, compilation, archiving, copyright, and protection of product design data. It serves as the foundation and framework for the entire series of standards.

2.Numbering Principles. The purpose is to define the general principles, basic requirements, and numbering methods for product design data files. This method ensures the consistency and traceability of data file identification.

1 Scope

GB/T 46848.6-2025 is the Chinese national standard covering the product structure - the bill of material and its views, the variants and configurations, the effectivity that says which version of the structure applies to which serial numbers, and the relationship between the engineering and manufacturing structures. It is one of the seven parts of GB/T 46848 issued together, a first edition, and it belongs with the PLM system requirements of GB/T

47688-2026. It was issued on 31 December 2025 and has been in force since 1 April 2026, as a first edition. The document is under the responsibility of the Standardization Administration of China. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the working environment, hierarchical division, creation method, node content, node attributes, state control, and usage requirements for the product structure. And BOM management requirements. This document applies to product structure management in various information systems during the product design phase.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 46848.1 Technical Product Documentation - Product Design Data Management Requirements - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 46848.1 apply to this document.

4 Work Environment

4.1 The working environment should have the functions of creating, editing, viewing, comparing, and configuring product structures, and should support the creation, addition, and borrowing of nodes at all levels. Use the following operations. copy, paste, delete, and sort.

4.2 The entire lifecycle of product structure creation, refinement, release, modification, and obsolescence should be based on a unified product data management system platform. Platform, or various design information management systems based on the functions and operations described in 4.1. At the start of implementation, the system's software should be clearly defined. Name and version number.

5.1 General Principles

5.1.1 The product structure is described in a tree-like structure with hierarchical division. In this tree, the root node represents a product or component, and branch nodes represent

components. Or sub-components, leaf nodes represent parts.

5.1.2 The product structure should be constructed according to the enterprise's management model and the hierarchical relationship between product components, and should reflect the product's functional division. Division and composition.

5.1.3 Product structure can be used to represent conceptual products, series of products, or individual products.

7 Approval and Issuance

GB/T 46848.8 Technical Product Documentation - Product Design Data Management Requirements - Part