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

GB/T 46848.1-2025

**Technical product documentation - Product design data
management requirements - Part 1: General principles**

技术产品文件 产品设计数据管理要求 第1部分：总则

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Access Control
- 5 Document Management
- 6 Product Structure Management
- 7 Approval and Issuance
- 8 Change Management
- 9 Storage and Maintenance

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 1 of GB/T 46848 "Requirements for the Management of Product Design Data in Technical Product Documentation". 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: CRRC Qingdao Sifang Co., Ltd., China Machinery Productivity

Promotion Center Co., Ltd., and the People's Liberation Army. PLA Factory No. 5719, Beijing Digital Fang Technology Co., Ltd., China Aero Engine Corporation Xi'an Power Control Technology Co., Ltd., Beijing Aerospace Systems Engineering Research Institute, SAIC-GM-Wuling Automobile Co., Ltd., and China Machinery Research Institute of Standards and Technology (Beijing) Co., Ltd. The main drafters of this document are. Wen Bo, Wu Ying, Pan Kanghua, Xiao Jiulin, Huang Songbo, Jiang Xuetao, Zhao Bo, Gan Yutian, Luo Haipeng, and 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 46848.1-2025 is the Chinese national standard covering the general principles of managing design data - what counts as design data, the states it passes through, the responsibilities and the rules the other parts of the series build on. Part 1 is the one to read first. 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 outlines the general rules for the classification, compilation, archiving, copyright, and protection of product design data. This document applies to the management of product design data during the product design process.

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 10609.1 Title Block of Technical Drawings

GB/T 10609.2 Technical Drawing Details

GB/T 14689 Technical Drawing Sheet Sizes and Formats

GB/T 17678 Standard for Archiving and Management of CAD Electronic Documents

GB/T 18894 Standard for Electronic Document Archiving and Electronic Records Management

GB/T 24734 (all parts) General Rules for Digital Product Definition Data of Technical Product Documentation

GB/T 26099 (all parts) General Rules for 3D Modeling of Mechanical Products

GB/T 28282-2012 Functional Specifications for Computer-Aided Process Design Systems

GB/T 46848.2 Technical Product Documentation - Product Design Data Management Requirements - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 26099.1, GB/T 24734.1, and GB/T 28282-2012, as well as the following terms and definitions, apply to this document.

3.1 Product design data Data generated during the product design process to describe the functional and physical characteristics of a product.

3.2 Two-dimensional drawing A collection of information reflecting the geometric, constraint, and engineering elements of a product using a two-dimensional plane.

4 Access Control

GB/T 46848.5 Technical Product Documentation - Product Design Data Management Requirements - Part

5 Document Management

GB/T 46848.6 Technical Product Documentation - Product Design Data Management Requirements - Part

6 Product Structure Management

GB/T 46848.7 Technical Product Documentation - Product Design Data Management Requirements - Part

7 Approval and Issuance

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

8 Change Management

GB/T 46848.9 Technical Product Documentation - Product Design Data Management Requirements - Part