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GB/T 47196-2026

Additive manufacturing - Specification for data interfaces

增材制造 数据接口规范

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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. 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 by the China Machinery Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Additive Manufacturing (SAC/TC562). This document was drafted by: Huazhong University of Science and Technology, China

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1 Scope

GB/T 47196-2026 is the Chinese national standard covering the data interfaces of an additive process - from the model and its representation through the build preparation and slicing to the machine instructions and the process data returned, and the formats at each handover. First edition, in force since 1 September 2026, with the additive manufacturing data set standard GB/T 47568-2026. It was issued on 27 February 2026 and has been in force since 1 September 2026, as a first edition. The document is under the responsibility of the China Machinery Industry Federation. This page is published from the official record of the 2026 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 types, requirements, design, and verification methods for additive manufacturing data interfaces. This document applies to interactions between users and software or hardware in additive manufacturing systems, between different software systems, between software and hardware, and between different hardware systems. Interface design and implementation for information exchange between components.

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 9387.1 Information Technology - Basic Reference Model for Open Systems
Interconnection - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 35351 and GB/T 9387.1 apply to this document.

4 Interface Type

4.1 Overview The data interface relationships in the additive manufacturing system are shown in Figure

1.The additive manufacturing data interfaces are structured according to the connection objects and the hierarchical information transmission levels. Different types of additive manufacturing interfaces can be categorized into human-machine interfaces, software interfaces, communication interfaces, and equipment interfaces. Figure

1.Schematic diagram of additive manufacturing data interface Users of additive manufacturing systems typically include model designers, process engineers, and software and equipment operators. Additive manufacturing software typically includes model design software, simulation software, data preparation software, equipment control software, and manufacturing execution system software. and monitoring software.