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

GB/T 47104-2026

**Thermal performance of buildings and building components -
Physical quantities and definitions**

建筑物和建筑构件的热性能 物理量和定义

(English Translation)

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Table of Contents

Preface
Introduction
1 Scope
2 Normative References
3 Terms and Definitions
Appendix A (Informative) Concept of Thermal Conductivity
References
Index

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 adopts ISO 7345:2018 "Thermal properties of buildings and building components - Physical quantities and definitions".

The following minimal editorial changes have been made to this document.

- a) Note has been amended (see 3.1.7);
- b) Changing " " to "-" in the formula corrected a typographical error (see 3.1.9);
- c) Permitted terms have been added (see 3.1.5, 3.1.9, 3.1.16).

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 Building Materials Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Thermal Insulation Materials (SAC/TC191).

Introduction

This document is used in conjunction with other insulation-related terminology standards. Insulation-related terminology standards include.

---ISO 9251 "Adiabatic heat transfer conditions and material properties terminology";

---ISO 9346 "Teleology of thermal and moisture transfer physical quantities of buildings and building materials";

---ISO 9229 "Insulation Terminology";

---ISO 9288 "Adiabatic Radiative Heat Transfer - Terminology".

Note: Appendix A explains the concept of thermal conductivity.

Thermal performance of buildings and building components Physical quantities and definitions

1 Scope

This document defines the physical quantities, definitions, and symbols for the thermal properties of buildings and building components, and provides the corresponding units.

Note: This document is limited to thermal performance and energy use in the built environment, and some of the definitions differ from those in ISO 80000-5.

2 Normative references

This document has no normative references.

3.1 Physical Quantities and Definitions

3.1.1

heat

calorie quantity

Note: The unit is joule (J).

3.1.2

heat flow rate

The amount of heat transferred into or out of the system per unit time.

Φ

Note: The unit is watt (W).

3.1.3

Heat flow per unit area.

$d\Phi$

Note 1: Use "area heat flux density" when it may be confused with "linear heat flux density" (3.1.4).

Note 2: The unit is watts per square meter (W/m²).

3.1.4

Heat flow per unit length.