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

GB/T 20219.1-2026

Replacing GB/T 20219-2015

**Rigid cellular plastics - Spray-applied polyurethane foam for
thermal insulation - Part 1: Material specifications**

硬质泡沫塑料 绝热用喷涂聚氨酯泡沫 第1部分：材料规范

(English Translation)

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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 1 of GB/T 20219 "Rigid Foamed Plastics for Thermal Insulation - Sprayed Polyurethane Foam". GB/T 20219 has been...

The following sections were published.

--Part 1: Material Specifications.

This document replaces GB/T 20219-2015 "Sprayed Rigid Polyurethane Foam for Thermal Insulation". Compared with GB/T 20219-2015, Apart from structural adjustments and editorial changes, the main technical changes are as follows.

--The classification has been changed (see Chapter 4, Chapter 3 in the 2015 edition);

--The physical properties have been changed (see Table 2, Table 2 in the 2015 version).

--The regulations regarding the flame retardant properties of foam have been revised, and the normative references GB 8624, GB 46520, and GB 55037 have been added.

GB 50016, GB 50072 (see 5.2, 4.2 of the 2015 edition);

--Insulation performance classification has been added (see Table 3);

--Added a specification regarding the direction of load application in the compressive strength test method (see 6.4);

--The requirements for specimen size in the dimensional stability test have been changed (see 6.5.1~6.5.3, 5.5.1~5.5.3 in the 2015 version).

--The method for determining thermal conductivity has been changed (see 6.7, 5.7 in the 2015 edition).

- Added a combustion performance test method (see 6.12);
- The batching process has been modified, and the normative references GB 50404 and GB 51440 have been added (see 7.2, 6.2 of the 2015 edition).
- The judgment rules have been changed (see 7.4, 6.4.1 and 6.4.2 in the 2015 version).
- Added a label (see Chapter 8).

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 National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Plastic Products (SAC/TC 48).

Introduction

GB/T 20219 "Rigid Foamed Plastics for Thermal Insulation - Sprayed Polyurethane Foam" is proposed to consist of two parts.

--Part 1: Materials Specification. The purpose is to define the classification and technical requirements for sprayed polyurethane foam used for thermal insulation.

--Part 2: Applications. The purpose is to specify the engineering applications and on-site spraying requirements for sprayed polyurethane foam for thermal insulation.

Sprayed polyurethane foam for rigid foam insulation Part 1: Material Specifications

1 Scope

This document specifies the classification and grading, requirements, inspection rules, and labeling of sprayed polyurethane foam for thermal insulation, and describes the corresponding test...

Verification method.

This document applies to sprayed polyurethane foam for insulation of buildings or non-buildings, with an operating temperature range of -60 °C to 80 °C.

This document does not apply to single-component polyurethane foam sealant materials or spray-coated and wrapped insulation pipe materials.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

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 6343 Determination of apparent density of foamed plastics and rubber GB 8624
Classification of fire performance of building materials and products GB/T 8810
Determination of water absorption rate of rigid foamed plastics GB/T 8811 Test method for
dimensional stability of rigid foamed plastics GB/T 8813 Determination of compressive
properties of rigid foamed plastics GB/T 9641 Determination of tensile properties of rigid
foamed plastics GB/T 10294 Determination of steady-state thermal resistance and related
properties of thermal insulation materials - Protective hot plate method GB/T 10295
Determination of steady-state thermal resistance and related properties of thermal
insulation materials - heat flow meter method GB/T 10799 Determination of Open-Cell and
Closed-Cell Volume Percentage of Rigid Foamed Plastics GB/T 19687 Determination of
Long-Term Thermal Resistance Changes in Closed-Cell Plastics - Accelerated Laboratory
Test Method GB/T 21332 Determination of water vapor permeability of rigid foamed plastics
GB 46520 Technical Specification for Fire Performance of Thermal Insulation Materials and
Products for Buildings GB 50016 Code for Fire Protection Design of Buildings GB 50072
Cold Storage Design Standard GB 50404 Technical Specification for Rigid Polyurethane
Foam Insulation and Waterproofing Engineering GB 51440 Standard for Construction and
Acceptance of Cold Storage GB 55037 General Code for Fire Protection of Buildings

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4.1 According to the load-bearing requirements, they are divided into 3 categories, and according to the compressive performance (compressive strength or compressive stress at 10% relative deformation), they are divided into 7 levels, as shown in Table 1.