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

GB/T 26689-2024

**Rigid polyurethane cellular plastics used in refrigerators and
freezers**

冰箱、冰柜用硬质聚氨酯泡沫塑料

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Table of Contents

1 Scope ...	1
2 Normative references ...	1
3 Terms and Definitions ...	1
4 Categories ...	1
5 Requirements ...	1
5.1 Appearance ...	1
5.2 Physical and mechanical properties ...	2
5.3 High and low temperature cycle performance ...	2
6 Test methods ...	2
6.1 State Adjustment ...	2
6.2 Appearance ...	2
6.3 Thermal conductivity ...	2
6.4 Compression strength or compression stress at 10% deformation ...	2
6.5 Dimensional stability ...	3
6.6 Apparent core density ...	3
6.7 Closed-cell ratio ...	3
6.8 Water absorption ...	3
6.9 High and Low Temperature Cycle Performance ...	3
6.10 Bond strength ...	3
7 Inspection Rules ...	3
7.1 Inspection categories ...	3
7.2 Batch and Sampling ...	4
4 Appendix A (Informative) Determination of bond strength ...	5
A.1 Test Instruments	5
A.2 Sample preparation	5
A.3 Test steps	5
A.4 Test results	5

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting is required. This document replaces GB/T 26689-2011 "Rigid polyurethane foam plastics for refrigerators and freezers" and is consistent with GB/T 26689-2011. In addition to structural adjustments and editorial changes, the main technical changes are as follows: Added a chapter on

"Terms and Definitions" (see Chapter 3);

- a) The product classification has been changed (see Chapter 4, Chapter 3 of the.2011 edition);
- b) The product appearance requirements have been changed (see 5.1, 4.1 of the.2011 edition);
- c) Changed "thermal conductivity" to "initial thermal conductivity" and changed the corresponding index requirements (see 5.2,.2011 edition 4.2);
- d) Added long-term thermal conductivity performance requirements and test methods (see
- e) The requirements for compressive strength or 10% compressive stress of deformation have been changed (see 5.2, 4.2 of the.2011 edition);
- f) The index requirements for apparent core density have been changed (see 5.2, 4.2 of the.2011 edition);
- g) The test method for thermal conductivity has been changed (see 6.3, 5.3 of the.2011 edition);
- h) The inspection items for factory inspection and type inspection have been changed (see 7.1,

1 Scope

GB/T 26689-2024 is the Chinese standard for the rigid polyurethane foam used in refrigerator and freezer cabinets. The foam is both the insulation and the structure of a cabinet, and its properties decide the appliance's energy label: the thermal conductivity determines the consumption, the dimensional stability determines whether the cabinet distorts or the liner cracks, and the flow and demould behaviour determine whether it fills the cavity at all. The formulation has also been rewritten twice by regulation, first away from CFCs and then away from HCFCs, which is why the standard is revised as the blowing agents change. It sets the classification and the requirements: the density and its distribution, the thermal conductivity and its ageing, the compressive strength, the dimensional stability at high and low temperature, the closed cell content, the water absorption, the adhesion to the liner and the cabinet, the flammability and the blowing agent. It then gives the test methods and the inspection rules. It took effect on 23 August 2024.

This document defines the terms and definitions of rigid polyurethane foam plastics for refrigerators and freezers, specifies the classification, requirements, inspection rules, and The corresponding test methods are described. This document applies to rigid polyurethane

foam for refrigerators and freezers produced by foaming with combined polyols and polyisocyanates as the main raw materials. material.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies. in this document.

GB/T 2918 Standard environment for conditioning and testing of plastic specimens

GB/T 6343-2009 Determination of apparent density of foam plastics and rubber

GB/T 8810-2005 Determination of water absorption of rigid cellular plastics

GB/T 8811-2008 Test method for dimensional stability of rigid cellular plastics

GB/T 8813-2020 Determination of compression properties of rigid cellular plastics

GB/T 10295-2008 Determination of steady-state thermal resistance and related properties of thermal insulation materials - Heat flow meter method

GB/T 10799-2008 Determination of open and closed cell volume percentage of rigid cellular plastics

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 low boiling point component The composition of the blowing agent (except CO₂) with a boiling point below 0°C under standard atmospheric pressure.

4 Categories

The products are divided into 3 types according to the type of physical foaming agent used. Class I Using cyclopentane as the sole blowing agent. Category II. Use a mixed blowing agent containing low-boiling point components (the content of low-boiling point components is greater than 1%, calculated based on the combined polyol). Class III Using other foaming agents.

5 Requirements

5.1 Appearance Except for defects caused by tearing off the outer skin, the product should have uniform color and pores, and no obvious defects such as cracks.