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

GB/T 47072-2026

**Thermal insulating products for building applications -
Determination of released and free acrylic acid content**

建筑用绝热制品 丙烯酸释放量和游离丙烯酸含量的测定

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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 Building Materials Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Thermal Insulation Materials (SAC/TC191). This document was drafted by: Nanjing Guocai Testing Co., Ltd., a subsidiary of China National Testing & Inspection Holding Group, and Chengdu Hanjiang New Material Technology Co., Ltd. Jiangsu Aikesaite New Materials Co., Ltd., Weilenweike Energy Saving Technology (Anhui) Co., Ltd., Winsun Energy Saving Group Co., Ltd., Saint-Gobain Ban (China) Management Co., Ltd., Dongguan Shengwei Electromechanical Equipment Technology Co., Ltd., Zhejiang Petrochemical Co., Ltd., Chongqing Haike Insulation Materials Material Co., Ltd. The main drafters of this document are. Li Yong, Wang Xu, Wang Ling, Gu Chunsheng, Shi Zhuo, Zhu Yuguo, Li Xiaoning, Shen Yin, Zhang Jianhong, Zhang Zhenfeng, and Tang Jian. Zhang Jun, Wan Zetao, Xia Keyu, Cui Chenglin, Liu Shiyu, Li Bingquan, Cheng Yanbin, Bai Zhixin. Acrylic emission levels in building insulation products and Determination of free acrylic acid content

1 Scope

GB/T 47072-2026 is the Chinese national standard covering acrylic acid in insulation - the residue of the acrylic binder that has replaced formaldehyde resins in mineral wool, and which needs its own measurement now that it is what the product releases indoors. First edition. It was issued on 28 January 2026 and has been in force since 1 August 2026, as a first edition. The document is under the responsibility of the China Building Materials 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 describes the determination of acrylic acid release and free acrylic acid in building insulation products using gas chromatography-mass spectrometry and liquid chromatography. Methods for determining content. This document applies to the acrylic acid release and free acrylic acid content in thermal insulation products such as glass wool, rock wool, and mineral wool decorative sound-absorbing panels used in construction. Determination of olefinic acid content.

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 4132 Thermal Insulation Terminology

GB/T 4844 Pure Helium, High-Purity Helium and Ultra-Purity Helium

GB/T 6682 Specifications and test methods for water used in analytical laboratories

3 Terms and Definitions

The terms and definitions defined in GB/T 4132 and the following terms and definitions apply to this document.

3.1 Under the specified test conditions, the mass concentration of acrylic acid released from the sample was detected in the outlet air of the climate chamber.

3.2 Free acrylic acid Acrylic acid that did not participate in the polymerization reaction in the product.

3.3 Load factor The ratio of the exposed surface area of the sample to the volume of the climate chamber.

3.4 Blank sampling travelblank The air is stored and transferred with the sampling tube without being sampled in the climate chamber.

Note. Used to assess the background conditions of the sampling tube during the sampling process.

4 Reagents and Materials

4.1 Acetone. Chromatographic grade.

4.2 Ethyl acetate. Chromatographic grade.