

ICS 83.180
CCS G 38



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

GB/T 46321-2025

Assessment of fungal growth resistance of adhesive

胶粘剂耐真菌生长性的评估

Issued on: October 5, 2025

Implemented on: May 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

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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 Petroleum and Chemical Industry Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Adhesives (SAC/TC185). This document was drafted by: Shanghai Jianke Inspection Co., Ltd., Shanghai Rubber Products Research Institute Co., Ltd., and Fujian Provincial Product Quality Inspection Institute. Research Institute, Asahikawa Chemical (Suzhou) Co., Ltd., Nanjing Ziyijie Technology R&D Co., Ltd., Shandong Wosai New Material Technology Co., Ltd., Changsha Le Yuanhua Chemical Technology Co., Ltd., Guangdong Academy of Sciences Institute of Microbiology (Guangdong Provincial Microbiology Analysis and Testing Center), Guangdong Jianyang New Materials Co., Ltd. The company, Shanghai Minhang District Corrosion Science and Technology Society, Hanning Chemical (Shanghai) Co., Ltd., Guangdong Yutian Bali Technology Co., Ltd. Shanghai Langyi Functional Materials Co., Ltd., Yantai Debon Technology Co., Ltd., Shanghai Customs Industrial Products and Raw Materials Testing Technology Center Dingli New Materials Technology Co., Ltd., Shandong Kain New Materials Technology Co., Ltd., and China Jiliang University. The main drafters of this document are. Xu Yanhua, Shen Yan, Hu Xiaozhen, Li Sujuan, Fu Dejiang, Wang Yurong, Wang Tao, Cheng Wenhui, Li Jin, Nie Lu, and Miao Ce. Huang Lei, Tang Zhenyu, Dou Jinbing, Lin Huayu, Tang Xiaofeng, Wang Jianbin, Zhang Lin, Du Bo, Hu Qian, Hu Yuhua, Li Jie. Evaluation of the resistance of adhesives to fungal growth Warning

---Users of this document should have practical experience working in a formal laboratory. This document does not cover all possible safety issues. Users are responsible for taking appropriate safety and health precautions.

1 Scope

GB/T 46321-2025 is the Chinese national standard covering whether mould will grow on a glue line - the fungal species and the inoculation, the humid incubation, the visual rating of growth on the specimen, and the retained bond strength afterwards, which matters in packaging, footwear and construction adhesives in a humid climate. First edition, in force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document describes the assessment method for the resistance of adhesives to fungal growth, including the test principle, standard test conditions, test equipment and materials, and culture. Culture medium and reagents, experimental procedures, result evaluation, and experimental reports. This document is applicable to the assessment of the resistance of adhesives to fungal growth in ordinary environments or the persistence of resistance to fungal growth after exposure to severe environmental conditions. The assessment.

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 2943 Adhesive Terminology

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

GB/T 19258.1 Ultraviolet radiation sources for sterilization - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 2943, as well as the following terms and definitions, apply to this document.

3.1 fungus One type lives a heterotrophic life, does not perform photosynthesis, has eukaryotic cells, and its vegetative body is a single cell or filamentous hyphae. Its cell wall contains chitin. Or cellulose, an organism with asexual and sexual reproduction characteristics. [Source: GB/T 12728-2006, 2.1.1]

3.2 The ability to tolerate or even inhibit the growth and reproduction of fungi on materials.

3.3 Even after being subjected to harsh environmental conditions, the material still retains

its resistance to fungal growth.

4.Experimental Principle A method simulating a fungal growth environment was used to culture adhesive specimens pre-inoculated with fungi. The growth of fungi on the specimen surface was then analyzed. The condition and the percentage of fungal area are assessed to determine the fungal resistance level of the adhesive.

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