

ICS 83.080.20

CCS G 31



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

GB/T 46830.2-2026

**Plastics - Liquid crystal polymer (LCP) moulding and extrusion
materials - Part 2: Preparation of test specimens and
determination of properties**

塑料 液晶聚合物（LCP）模塑和挤出材料 第2部分：试样制备和性能测定

Issued on: May 25, 2026

Implemented on: December 1, 2026

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

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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 2 of GB/T 46830 "Plastic Liquid Crystal Polymers (LCP) Molding and Extrusion Materials". GB/T 46830 has been... The following sections were published.

1. Naming Systems and Classification Basics;

2. Sample preparation and performance determination. 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 Plastics Standardization (SAC/TC15). This document was drafted by: Zhonglan Chenguang Chemical Research and Design Institute Co., Ltd., Shanghai Pulite Composite Materials Co., Ltd., and Xiamen Jia Terli Technology Co., Ltd., Kingfa Science & Technology Co., Ltd., Shenzhen Wotech New Materials Co., Ltd., Zhejiang Shengxiao Chemical Co., Ltd. Company, Chongqing Kangshideyuan Technology Industry Co., Ltd., Suzhou Xinguangyi Electronics Co., Ltd., Dongguan Weiside Technology Development Co., Ltd. Company, Bomi Technology Co., Ltd., Guangdong Zhongcheng Special Materials Co., Ltd., and Guangdong Green New Materials Co., Ltd. The main drafters of this document are. Liu Lirong, Wei Wei, Zheng Haifeng, Chen Pingxu, He Zheng, Feng Yongsheng, Zhou Jun, Xia Chaohua, Zhang Wenfu, and Wang Huasen. Liu Yao, Yuan Peng, Chen Fugui, Zheng Yuhang.

GB/T 46830, "Plastic Liquid Crystal Polymers (LCP) Molding and Extrusion Materials," is the fundamental standard for liquid crystal polymers, providing a framework for their application. Product standards provide support. GB/T 46830 is proposed to consist of two parts.

1. Naming System and Classification Basis. The aim is to establish a standard model for naming liquid crystal polymer materials. Naming methods and classification principles.

2. Sample Preparation and Performance Determination. The aim is to establish suitable sample preparation methods and properties for liquid crystal polymer materials. It can determine the items, methods, and conditions. This document describes the sample preparation and testing methods for liquid crystal polymer (LCP) molding and extrusion materials, based on their characteristics. Plastic liquid crystal polymer (LCP) molding and extrusion materials Part

2 Sample Preparation and Performance Determination

1. Scope This document describes the sample preparation and testing methods for the performance testing of liquid crystal polymer (LCP) molding and extrusion materials, and specifies the test materials... Material handling and/or requirements for the condition of test materials and specimens before molding. The performance testing methods were selected from GB/T 19467.1 General Test Methods. This document also lists a wide range of molding and extrusion materials. Other test methods that are applicable or of special significance, as well as the methods for determining characteristic properties in GB/T 46830.1-2026. To ensure the reproducibility and repeatability of the test results, it is necessary to use the sample preparation and conditioning methods specified in this document. The specified specimen size and test methods. Test data obtained using specimens prepared under different conditions or using specimens of different sizes can be... They may not be consistent.

3. Terms and Definitions This document does not contain any terms or definitions that need to be defined.

4 Sample Preparation

4.1 General Requirements The same processing technology (injection molding) and processing conditions should be used to prepare the test specimens.

4.2 Pretreatment of materials before molding Before processing, the moisture content of the material should not exceed 0.01%. If the moisture content exceeds this limit, the material should be dried according to the manufacturer's requirements. Until the moisture content is below the limit.

4.3 Injection Molding Prepare injection molded specimens according to GB/T 17037.1 using the conditions specified in Table 1. Due to the shear sensitivity of LCP materials, a smaller gate is preferable. When based on data from relevant specification reports, if the gate design is consistent with... If the applicable molding time or method requirements differ, the gate design should be reported.

5. Conditioning of the sample After injection molding, the specimens should be conditioned

according to the conditions specified in GB/T 2918 at a temperature of $(23\pm 2)^{\circ}\text{C}$ and a relative humidity of $(50\pm 10)\%$. At least 12 hours.

6. Performance Measurement The performance testing and data representation of liquid crystal polymers shall be performed in accordance with the standards, additional instructions, and notes given in GB/T 19467.1, unless otherwise specified in Table 2. As specifically noted in Table 3, all tests should be conducted under standard test conditions. temperature $(23\pm 2)^{\circ}\text{C}$, relative humidity $(50\pm 10)\%$.