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

GB/T 46399-2025

Fibre grade para-phenylene terephthalamide (PPTA) powder

纤维级聚对苯二甲酰对苯二胺 (PPTA) 粉体

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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 and is under the jurisdiction of the National Technical Committee on Standardization of Chemical Fibers (SAC/TC586). This document was drafted by: Sinopec Yizheng Chemical Fiber Co., Ltd., Taihe New Materials Group Co., Ltd., and Sinochem High Performance Fiber. Materials Co., Ltd., Zhongfang Special Fiber Co., Ltd., China Chemical Fiber Industry Association, Ningxia Taihe Aramid Fiber Co., Ltd., Zhongfang New Materials Co., Ltd., Shanghai Textile Science Research Institute Co., Ltd., Shanghai Textile Group Testing and Standards Co., Ltd., Bluestar (Chengdu) New Materials Materials Co., Ltd., Xinxing Jihua (Beijing) Materials Technology Research Institute Co., Ltd., Jiangsu Shengbang New Materials Co., Ltd., Hangzhou Zhuoxiang Technology Co., Ltd. Limited Company, Jiangsu New Vision Advanced Functional Fiber Innovation Center Co., Ltd., Shanghai Textile Research Institute Jiangban Textile Technology Service Co., Ltd., Henan Shen Mafanglun Technology Development Co., Ltd. The main drafters of this document are. Wang Fang, Su Fengxian, Chi Haiping, Chen Yibao, Fan Zhiping, Jin Gaoling, Zhang Jianhong, Yu Anjun, Li Hongjie, and Shi Shuangkai. Li Yuchang, Zhao Pengfei, Yang Qin, Lou Jianjun, Liu Qingbei, Liang Na, Chen Saisai, Dong Xiaotang, Sun Haojie. Fiber-grade poly(p-phenylene terephthalamide) (PPTA) powder

1 Scope

GB/T 46399-2025 is the Chinese national standard covering the polymer powder aramid fibre is spun from - the inherent viscosity that stands for the molecular weight, the moisture and the residual solvent and salt, the particle size and the impurities, all of which decide

whether the spun fibre reaches its strength. PPTA is the polymer behind aramid fibre, used in ballistic protection and in tyre reinforcement. First edition, in force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document defines the terminology and definitions for fiber-grade poly(p-phenylene terephthalamide) (PPTA) powder products and specifies the product's technical specifications. The requirements, inspection rules, marking, packaging, transportation and storage are described, along with the corresponding test methods. This document applies to para-polyarylamide powder for fibers, which is produced by the condensation polymerization of p-phenylenediamine and terephthaloyl chloride.

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 602 Preparation of standard solutions for the determination of impurities in chemical reagents

GB 5009.90-2016 National Food Safety Standard. Determination of Iron in Food

GB 5009.92-2016 National Food Safety Standard - Determination of Calcium in Food

GB/T 6678 General Rules for Sampling of Chemical Products

GB/T 6679 General Rules for Sampling of Solid Chemical Products

GB/T 12010.6 Plastics - Polyvinyl alcohol materials (PVAL) - Part

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Composed of linear macromolecules with amide groups linked together at the para-position of benzene rings, wherein at least 85% of the amide bonds are directly linked to two amide groups. Polymer powder between the para and para positions of the benzene ring.

3.2 sieving remainder The poly(p-phenylene terephthalamide) powder remaining on the sieve after sieving.

4 Technical Requirements

4.1 Product Classification The products are divided into two grades. superior and qualified.

4.2 Performance Items and Indicators It should comply with the requirements in Table 1.

6 Determination of particle size

GB/T 30921.7 Industrial Purified Terephthalic Acid (PTA) - Test Methods - Part

7 Determination of b* Value - Colorimeter Method

GB/T 41671 Determination of Solvent Residue in Chemical Fibers FZ/T 50057-2022

Determination of total antimony content in polyethylene terephthalate (PET) fibers