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

GB/T 37169-2018

Metal mesh based PTFE strip - Specification and test methods

金属编织网基聚四氟乙烯软带技术要求和检验方法

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard was proposed by the China Machinery Industry Federation. This standard is under the jurisdiction of the National Sliding Bearing Standardization Technical Committee (SAC/TC236). This standard is drafted by: Zhejiang Changsheng Sliding Bearing Co., Ltd. Participated in the drafting of this standard. Zhejiang Shuangfei Oilless Bearing Co., Ltd., Zhejiang Zhongda Precision Parts Co., Ltd., Zhongjisheng Productivity Promotion Center, Jiashan Sanfu Sliding Bearing Co., Ltd. Metal woven mesh based PTFE soft tape Technical requirements and test methods

1 Scope

China's national specification and test methods for flexible PTFE tape on a woven metal mesh backing. It specifies the types and basic dimensions, the product structure, the technical requirements and the test methods. The material is a composite that solves PTFE's structural weakness. Polytetrafluoroethylene has the lowest friction of any solid and is chemically inert to essentially everything, which makes it the ideal bearing and sealing surface; it also creeps under sustained load, so a plain PTFE part slowly extrudes out from under whatever is pressing on it. Bonding it to a woven metal mesh anchors it mechanically: the mesh takes the load and restrains the polymer from flowing, while the PTFE surface does the sliding. The result is used as a sealing strip and a low-friction sliding layer in bearings, expansion joints and gaskets, where the requirement is a surface that will slide reliably for decades without lubrication or attention.

This standard specifies the type and basic dimensions, product structure, technical requirements and test methods of metal woven mesh based PTFE flexible tape. This standard is applicable to the manufacture of modified polytetrafluoroethylene covered in the mesh of metal woven mesh and the surface of mesh by rolling and sintering process. A metal woven mesh-based polytetrafluoroethylene soft belt (hereinafter referred to as a soft

belt).

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document. Plastics -- Determination of density of non-foam plastics -- Part 1 . Dipping method, liquid pycnometer method and titration method Determination of tensile properties of plastics - Part 5. Test conditions for uniaxial fibre reinforced composites Methods of chemical analysis of copper and copper alloys - Part 2. Determination of phosphorus content Methods of chemical analysis of copper and copper alloys - Part 10. Determination of tin content

GB/T 5231-2012 Processing of copper and copper alloy grades and chemical composition

3 Type and basic size

3.1 Soft belts are usually made of rectangular strips with a length of 400mm~500mm and a width of 100mm~150mm. The degree is (0.48 ± 0.02) mm.

3.2 Soft belts can be manufactured into various forms such as backing plates, gaskets, bushings, and flanged bushings according to different needs.

3.3 Softband products and products with special requirements may be separately agreed by the supplier and the buyer.

4 Product structure

The soft belt is made of tin bronze wire woven mesh, and the modified polytetrafluoroethylene is filled and covered in the mesh by rolling and sintering processes. The inner and inner surfaces are machined into soft belts of the required specifications. The modified polytetrafluoroethylene is a filling material such as polytetrafluoroethylene, fiber and molybdenum disulfide. mixture.

5.1 Base material

5.1.1 Chemical composition The main chemical composition of the matrix should meet the requirements of GB/T 5231-2012, see Table 1.