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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 38013-2019

Footwear - Test method for shoelaces - Knot slippage property

鞋类 鞋带试验方法 抗松脱性能

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Table of Contents

Foreword

GB/T 38013-2019 Footwear - Test Method for Shoelace -Knot Slippage Property

Footwear - Test Methods for Shoelace -Knot Slippage Property 1 Scope

This Standard stipulates the test methods for shoelace in knot slippage property. This Standard is applicable to shoelaces made of various textures.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 16825.1-2008 Verification of Static Uniaxial Testing Machines - Part 1:

Tension/compression Testing Machines - Verification and Calibration of the Force-measuring System;

GB/T 22049-2019 Footwear - Standard Atmospheres for Conditioning and Testing of Footwear and Components for Footwear

3 Terms and Definitions

The following terms and definitions are applicable to this document.

3.1 Loose Loose refers to the process of the loosening and slippage of shoelaces that are fastened.

3.2 Bowknot Bowknot refers to the mode of tying the knot of shoelace into the shape of a butterfly, as it is shown in Figure 1.

4 Principle

Pre-tie a bowknot or a knot with the shoelace; adopt tensile machine, use fixed load, to fasten the bowknot or the knot. Then, adopt the tensile machine to pull and loosen the bowknot or the knot. Record the maximum force that is needed during the loosening process of the shoelace; the result shall be expressed in (N).

5 Test Equipment 5.1 Tension Test Machine

Tension test machine shall comply with the requirements in GB/T 16825.1-2008; accuracy shall at least be Grade-2; movement speed shall at least be (10 ± 1) mm/min; it shall be able to automatically record the force value.

5.2 Molding Plate Molding plate refers to resin plate (dimensions: around 60 mm 115 mm

1.5 mm) which is used to fixate shoelace.

5.3 Straight Steel Ruler The measuring range of straight steel ruler shall be not lower than 300 mm, accurate to 1 mm.

6 Sample and Conditioning 6.1 Sample

Sample shall be 3 intact shoelaces without any flaws or ruptures.

6.2 Sample Conditioning Before the test, place all the samples under the conditions of the reference standard environment that complies with the stipulations in GB/T 22049-2019; conduct sample conditioning for at least 24 h.

7 Test Procedures 7.1 General Principles

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