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Flexible cellular polymeric materials — Determination of antibacterial effectiveness

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 4, *Products (other than hoses)*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Products with a label or marking tag of antibacterial treatment, such as kitchen sponge cleaners, mattresses, pillows and sofas, are available in markets worldwide. However, there is no common standard to evaluate the effectiveness of the antibacterial treatment. The material used for these products is usually a flexible cellular polymeric foam treated with antibacterial agents available in the markets. Because of the porosity of the material, efficient contact between a testing bacterial suspension and the material is critical in an evaluation of the effectiveness of antibacterial treatment. A specific procedure has been developed and adopted for this test method so that the test bacteria can efficiently make contact with the open cell surface of the flexible cellular polymeric test specimens. This document will help consumers to know whether these products have the appropriate quality of antibacterial effectiveness.

Flexible cellular polymeric materials — Determination of antibacterial effectiveness

WARNING — Persons using this document should be familiar with microbiology. This document does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this document to establish appropriate safety and health practices and to determine the applicability of any national regulatory conditions.

1 Scope

This document specifies a method of determining the antibacterial effectiveness of open-cell flexible cellular polymeric antibacterial treated materials, including their intermediate and final products.

This document is suitable for flexible cellular polymeric materials because the test procedure enables the test inoculum to efficiently contact with the surface of open cell in the flexible cellular polymeric materials.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1923, *Cellular plastics and rubbers — Determination of linear dimensions*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
surface of flexible cellular polymeric material
surface that is not only the outer peripheral surface but also the true surface of open-cell structure of flexible cellular polymeric material

3.2
antibacterial
condition suppressing the growth of bacteria on the surface of flexible cellular polymeric material

3.3
antibacterial agent
agent that inhibits the growth of bacteria on flexible cellular polymeric materials

3.4
antibacterial treatment
treatment with antibacterial agents

3.5
antibacterial treated material
flexible cellular polymeric material that is treated with antibacterial agents