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

GB/T 46470-2025

**Leather - Tests for colour fastness - Colour fastness to
migration into polymeric material**

皮革 色牢度试验 颜色迁移到聚合物上的色牢度

(English Translation)

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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 modified to adopt ISO 15701:2022 "Leather - Tests for color fastness - Color migration to polymers".

This document has undergone significant structural adjustments compared to ISO 15701:2022. A table comparing the structural numbering changes between the two documents is provided.

See Appendix A.

This document differs significantly from ISO 15701:2022. The relevant clauses are indicated in vertical single-line margins.

The lines (|) are marked. A summary of these technical differences and their reasons can be found in Appendix B.

The following editorial changes have been made to this document.

---Added unit descriptions for each physical quantity in formula (1) (see 6.2.1);

---Notes to sections 5.1 and 5.3 of ISO 15701:2022 and informative reference to FEPA 43-1.2006 in section 5.4 have been deleted;

---Appendix A (Informative) has been removed from ISO 15701:2022.

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 National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Leather Industry (SAC/TC252).

1 Scope

This document describes a test method for determining the tendency of dyes and pigments in leather to migrate to polymers.

This document applies to the determination of color fastness to polymers for various types of leather.

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 251 Textiles - Tests for color fastness - Assessment of staining - Gray scale (GB/T 251-2008, ISO 105-A03:1993) IDT) GB/T 39364 Sampling sites for testing the chemical, physical, mechanical and color fastness of leather (GB/T 39364-2020, ISO 2418.

2017, MOD)

GB/T 46471 General Rules for Testing Color Fastness to Leather (GB/T 46471-2025, ISO 7906:2022, MOD)

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Principles

The test surface of the leather sample is attached to a polymer sheet (such as a white polyvinyl chloride sheet) to form a composite sample, and then the composite sample is...

After being placed in a suitable apparatus and maintained at a certain pressure and temperature for a specified time, the polymer film is evaluated using a gray scale for staining assessment.

The staining grade of the board should be noted, and if necessary, the variation of the staining hue relative to the leather color should be indicated.

Leather with a coating can be tested directly, or the coating can be damaged before testing.

Polymer standard sheets can be used to assess the tendency of color to migrate from leather to synthetic materials used with it.

The testing and evaluation of colorfastness in this document shall be consistent with the content described in GB/T 46471.

5 Equipment and Materials

5.1

Testing apparatus for holding the combined sample sandwiched between plates of inert material (such as glass or plastic plates), equipped with a mass of approximately 5 kg.

The load is sufficient to uniformly apply a pressure of (81.7 ± 4.0) kPa to the assembled specimen between inert material plates. The pressure tolerance includes the allowable pressure due to the inert material.

The maximum supplementary mass includes the plate's own weight of 250g. The design of the testing device should ensure that the pressure remains constant throughout the entire testing process.

Note 1: The pressure of 81.7 kPa comes from the mass of a 5 kg load, and the pressure applied to a leather sample with dimensions of 30 mm x 20 mm is 833 g/cm².

Note 2: Test equipment that can remove the load after fixing the combined specimens is not applicable to this document.

5.2

Oven, temperature controllable up to $(50 \pm 2)^{\circ}\text{C}$.

5.3

Polymer sheet, white is recommended. Unless otherwise specified, use white PVC sheet with a thickness of (0.5 ± 0.1) mm and dimensions approximately [missing information].