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Plastics — Polyols for use in the production of polyurethanes — Determination of water content

Plastiques — Polyols destinés à la production de polyuréthanes — Dosage de l'eau

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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 document 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/TC61, *Plastics*, Subcommittee SC12, *Thermosetting materials*.

This third edition cancels and replaces the second edition (ISO 14897:2002), of which it constitutes a minor revision.

The changes are as follows:

— the title has been changed to plural form to read: "Plastics — Polyols for use in the production of polyurethanes — Determination of water content".

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.

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Introduction

This method is for the determination of water content in polyether polyols, which are used in the preparation of polyurethane prepolymers and polyurethane products. Knowledge of this value is important to polyurethane production.

The document is based on ASTM D 4672.

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Plastics — Polyols for use in the production of polyurethanes — Determination of water content

WARNING — Persons using this document should be familiar with normal laboratory practice. 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 applicable national regulatory conditions prior to use.

1 Scope

This document specifies methods used to measure the water content of polyols employed as polyurethane raw materials.

Method A is a manual amperometric method which has been included to better define the principles of the Karl Fischer measurement. Amperometric methods are applicable to a wide range of polyols, including those which have enough colour to obscure a visual end-point. Method B includes an automated amperometric procedure and an automated coulometric procedure.

The coulometric procedure is an absolute method that does not require calibration and gives improved sensitivity compared with amperometric methods.

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 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 6353-1, *Reagents for chemical analysis — Part 1: General test methods*

ISO 6353-2, *Reagents for chemical analysis — Part 2: Specifications — First series*

ISO 6353-3, *Reagents for chemical analysis — Part 3: Specifications — Second series*

3 Terms and definitions

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

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

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

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

3.1
polyol
organic compound containing two or more hydroxyl groups suitable for reaction with isocyanates

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