International Standard

ISO 26603

Plastics — Aromatic isocyanates for use in the production of polyurethanes — Determination of total chlorine

Plastiques — Isocyanates aromatiques destinés à la production de polyuréthanes — Dosage du chlore total

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Foreword

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This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 12, *Thermosetting materials*.

This third edition cancels and replaces the second edition (ISO 26603:2017), which has been technically revised.

The main changes are as follows:

— Test Method C has been added:

  — in Clause 4, a new subclause 4.4 has been added;

  — a new Clause 9 has been added and subsequent clauses have been renumbered.

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

Isocyanates are typically produced by phosgenation of an aromatic amine using chlorine-substituted benzenes (e.g. o-dichlorobenzene) as reaction solvents. ISO 15028 is used to determine the hydrolyzable chlorine content of the isocyanates. The test methods in this document are used to determine the total chlorine content of aromatic isocyanates. The difference between the total chlorine content and the hydrolyzable chlorine content is a measure of the reaction solvents left in the product, and therefore is a useful tool for assessing product quality.

NOTE This document is technically equivalent to ASTM D4661–03.

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SAFETY PRECAUTIONS — Persons using this document should be familiar with normal laboratory practice, if applicable. This document does not purport to address all of the safety concerns, 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 any regulatory requirements before use.

1 Scope

This document specifies the determination of the total chlorine content of aromatic isocyanates used in the preparation of polyurethanes.

The difference between the total chlorine content and the hydrolyzable chlorine content (see ISO 15028) is a measure of the process solvents left in the product. All the test methods are applicable to a variety of organic compounds, including aliphatic isocyanates, but the amount of sample used might need to be adjusted.

These test methods can be used for research or for quality control.

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 1042, *Laboratory glassware — One-mark volumetric flasks*

ISO 3696, *Water for analytical laboratory use — Specification and 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
isocyanate
organic compound containing one or more NCO groups

3.2
polyurethane
polymer prepared by the reaction of an organic di- or polyisocyanate with compounds containing two or more hydroxyl groups