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Plastics — Determination of xylene-soluble matter in polypropylene

Plastiques — Détermination des matières présentes dans le polypropylène solubles dans le xylène

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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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

This second edition cancels and replaces the first edition (ISO 16152:2005), which has been technically revised.

The main changes are as follows:

— the introduction has been updated;

— the mandatory normative references clause has been added and subsequent clauses have been renumbered;

— the pipette with capacity of 200 ml has been deleted from the list of apparatus;

— the symbols S_s, S_m and S_c have been replaced with w_s, w_m and w_c, respectively (see 3.1 and 4.5);

— an automated instrumental method has been added (see Clause 5);

— a new informative Annex A (Precision data for polypropylene obtained from an intercomparison of xylene-soluble content testing) has been added.

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

With the development of analytical and testing instruments, a new technique of measuring xylene-soluble matter in polypropylene by automatic instrument has been developed. Automation improves the precision, removing human-factor variability, and enhances safety for the laboratory and the operator.

The soluble content represents the fraction of amorphous material and it is important as it has a major influence on the properties of the polypropylene.

The method is used to quantify the soluble/amorphous fraction in polypropylene homopolymers as well as copolymers and can be used with other polyolefin materials, such as homopolymer polyethylene or polyethylene α-olefin copolymers.