

STN	Plasty Diferenčná snímacia kalorimetria (DSC) Časť 6: Stanovenie indukčného času oxidácie (izotermický OIT) a indukčnej teploty oxidácie (dynamická OIT) (ISO 11357-6: 2025)	STN EN ISO 11357-6 64 0748
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Plastics - Differential scanning calorimetry (DSC) - Part 6: Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT) (ISO 11357-6:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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EN ISO 11357-6

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English Version

**Plastics - Differential scanning calorimetry (DSC) - Part 6:
Determination of oxidation induction time (isothermal
OIT) and oxidation induction temperature (dynamic OIT)
(ISO 11357-6:2025)**

Plastiques - Analyse calorimétrique différentielle (DSC)
- Partie 6: Détermination du temps d'induction à
l'oxydation (OIT isotherme) et de la température
d'induction à l'oxydation (OIT dynamique) (ISO 11357-
6:2025)

Kunststoffe - Dynamische Differenzkalorimetrie (DSC)
- Teil 6: Bestimmung der Oxidations-Induktionszeit
(isothermische OIT) und Oxidations-
Induktionstemperatur (dynamische OIT) (ISO 11357-
6:2025)

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EN ISO 11357-6:2025 (E)

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European foreword

This document (EN ISO 11357-6:2025) has been prepared by Technical Committee ISO/TC 61 "Plastics" in collaboration with Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by SIS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2025, and conflicting national standards shall be withdrawn at the latest by December 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 11357-6:2025 has been approved by CEN as EN ISO 11357-6:2025 without any modification.



International Standard

ISO 11357-6

Plastics — Differential scanning calorimetry (DSC) —

Part 6:

Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT)

Plastiques — Analyse calorimétrique différentielle (DSC) —

*Partie 6: Détermination du temps d'induction à l'oxydation (OIT
isotherme) et de la température d'induction à l'oxydation (OIT
dynamique)*

Fourth edition 2025-06

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ISO 11357-6:2025(en)**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 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 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 249, *Plastics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 11357-6:2018), which has been technically revised.

The main changes are as follows:

- the isothermal stepwise temperature calibration has been added for isothermal OIT.

A list of all parts in the ISO 11357 series can be found on the ISO website.

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.

ISO 11357-6:2025(en)**Introduction**

The measurement of oxidation induction time or temperature described in this document provides a tool to assess the conformity of the material tested to a given formulation of plastics compounds. However, it is not intended to provide the concentration of antioxidant. Different antioxidants can have different oxidation induction times or temperatures. Due to interaction of the antioxidant with other substances in the formulation, different oxidation induction times or temperatures can result even with products having the same type and concentration of antioxidant.

Plastics — Differential scanning calorimetry (DSC) —

Part 6:

Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT)

1 Scope

This document specifies methods for the determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT) of polymeric materials by means of differential scanning calorimetry (DSC). It is applicable to polyolefin resins that are in a fully stabilized or compounded form, either as raw materials or finished products. It can be applicable to other plastics.

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 472, *Plastics — Vocabulary*

ISO 11357-1, *Plastics — Differential scanning calorimetry (DSC) — Part 1: General principles*

ISO 17855-2, *Plastics — Polyethylene (PE) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties*

ISO 19069-2, *Plastics — Polypropylene (PP) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties*

ISO 21302-2, *Plastics — Polybutene-1 (PB-1) moulding and extrusion materials — Part 2: Preparation of test specimens and determination of properties*

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