

SLOVENSKI STANDARD kSIST FprEN ISO 11357-4:2014

01-april-2014

Polimerni materiali - Diferenčna dinamična kalorimetrija (DSC) - 4. del: Ugotavljanje specifične toplotne kapacitete (ISO/FDIS 11357-4:2014)

Plastics - Differential scanning calorimetry (DSC) - Part 4: Determination of specific heat capacity (ISO/FDIS 11357-4:2014)

Kunststoffe - Dynamische Differenz-Thermoanalyse (DSC) - Teil 4: Bestimmung der spezifischen Wärmekapazität (ISO/FDIS 11357-4:2014)

Plastiques - Analyse calorimétrique différentielle (DSC) - Partie 4: Détermination de la capacité thermique massique (ISO/FDIS 11357-4:2014)

Ta slovenski standard je istoveten z: FprEN ISO 11357-4

ICS:

17.200.10 Toplota. Kalorimetrija Heat. Calorimetry 83.080.01 Polimerni materiali na Plastics in general

splošno

kSIST FprEN ISO 11357-4:2014 en,de

kSIST FprEN ISO 11357-4:2014

FINAL DRAFT

INTERNATIONAL STANDARD

ISO/FDIS 11357-4

ISO/TC **61**/SC **5**

Secretariat: DIN

Voting begins on: **2014-03-06**

Voting terminates on:

2014-05-06

Plastics — Differential scanning calorimetry (DSC) —

Part 4:

Determination of specific heat capacity

Plastiques — Analyse calorimétrique différentielle (DSC) — Partie 4: Détermination de la capacité thermique massique

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

Please see the administrative notes on page iii



Reference number ISO/FDIS 11357-4:2014(E)

ISO/FDIS 11357-4:2014(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

ISO/CEN PARALLEL PROCESSING

This final draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO-lead** mode of collaboration as defined in the Vienna Agreement. The final draft was established on the basis of comments received during a parallel enquiry on the draft.

This final draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel two-month approval vote in ISO and formal vote in CEN.

Positive votes shall not be accompanied by comments.

Negative votes shall be accompanied by the relevant technical reasons.

kSIST FprEN ISO 11357-4:2014

ISO/FDIS 11357-4:2014(E)

| Contents | | Page |
|----------|---|------|
| Fore | eword | v |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Principle 4.1 General 4.2 Continuous-scanning method 4.3 Stepwise-scanning method | |
| 5 | Apparatus | 4 |
| 6 | Test specimen | 4 |
| 7 | Test conditions and specimen conditioning | 4 |
| 8 | Procedure 8.1 Selection of crucibles 8.2 Setting up the apparatus and adjustment of isothermal baselines 8.3 Measurement of specific heat capacity of calibration material 8.4 Specimen run | |
| 9 | Determination of specific heat capacities 9.1 Calculation of specific heat capacities 9.2 Numerical rounding of the results | 7 |
| 10 | Precision and bias | 8 |
| 11 | Test report | 8 |
| Ann | nex A (informative) An approximate expression of the specific heat capacityof pure [3] to [5] | |
| Ribl | liography | 12 |

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. www.iso.org/directives

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received. www.iso.org/patents

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical and chemical properties*.

This second edition cancels and replaces the first edition (ISO 11357-4:2005). This minor revision contains the following changes:

- a) all normative reference were changed into undated ones;
- b) the term "pan" was replaced by "crucible" within the whole text;
- c) the endothermic direction, a, was added in all figures and key.

ISO 11357 consists of the following parts, under the general title *Plastics — Differential scanning calorimetry (DSC)*:

- Part 1: General principles
- Part 2: Determination of glass transition temperature and glass transition step height
- Part 3: Determination of temperature and enthalpy of melting and crystallization
- Part 4: Determination of specific heat capacity
- Part 5: Determination of characteristic reaction-curve temperatures and times, enthalpy of reaction and degree of conversion
- Part 6: Determination of oxidation induction time (isothermal OIT) and oxidation induction temperature (dynamic OIT)
- Part 7: Determination of crystallization kinetics

kSIST FprEN ISO 11357-4:2014