



SLOVENSKI STANDARD

SIST EN ISO 6252:2000

01-maj-2000

Polimerni materiali - Ugotavljanje napetostne korozije (ESC) - Metoda konstantne natezne obremenitve (ISO 6252:1992)

Plastics - Determination of environmental stress cracking (ESC) - Constant-tensile-stress method (ISO 6252:1992)

Kunststoffe - Bestimmung der umgebungsbedingten Spannungsrißbildung (ESC) - Zeitstandzugversuch (ISO 6252:1992)

Plastiques - Détermination de la fissuration sous contrainte dans un environnement donné (ESC) - Méthode sous contrainte de traction constante (ISO 6252:1992)

[https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-](https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-a313308e5d39/sist-en-iso-6252-2000)

[a313308e5d39/sist-en-iso-6252-2000](https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-a313308e5d39/sist-en-iso-6252-2000)

Ta slovenski standard je istoveten z: EN ISO 6252:1997

ICS:

83.080.01	Polimerni materiali na splošno	Plastics in general
-----------	--------------------------------	---------------------

SIST EN ISO 6252:2000

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 6252:2000

<https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-a313308e5d39/sist-en-iso-6252-2000>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 6252

November 1997

ICS 83.080

Descriptors: see ISO document

English version

Plastics - Determination of environmental stress cracking (ESC)
- Constant-tensile-stress method (ISO 6252:1992)

Plastiques - Détermination de la fissuration sous contrainte
dans un environnement donné (ESC) - Méthode sous
contrainte de traction constante (ISO 6252:1992)

Kunststoffe - Bestimmung der umgebungsbedingten
Spannungsrißbildung (ESC) - Zeitstandzugversuch (ISO
6252:1992)

This European Standard was approved by CEN on 16 October 1997.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN ISO 6252:2000](https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-a313308e5d39/sist-en-iso-6252-2000)

<https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-a313308e5d39/sist-en-iso-6252-2000>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard from Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

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 May 1998, and conflicting national standards shall be withdrawn at the latest by May 1998.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

iTeh STANDARD PREVIEW

The text of the International Standard ISO 6252:1992 has been approved by CEN as a European Standard without any modification.

SIST EN ISO 6252:2000

NOTE: Normative references to International Standards are listed in annex ZA (normative).

a313308e5d39/sist-en-iso-6252-2000



Annex ZA (normative)
Normative references to international publications
with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 291		Plastics - Standard atmospheres for conditioning and testing	EN ISO 291	1997
ISO 899-1	1993	Plastics - Determination of creep behaviour - Part 1: Tensile creep	EN ISO 899-1	1996
ISO 2818	1994	Plastics - Preparation of test specimens by machining	EN ISO 2818	1996
ISO 3167	1993	Plastics - Multipurpose test specimens	EN ISO 3167	1996
ISO 4599	1986	Plastics - Determination of resistance to environmental stress cracking (ESC) - Bent strip method	EN ISO 4599	1996

STANDARD PREVIEW
 (standards.iteh.ai)
 SIST EN ISO 6252:2000
<https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-a313308e5d39/sist-en-iso-6252-2000>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 6252:2000

<https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-a313308e5d39/sist-en-iso-6252-2000>

INTERNATIONAL STANDARD

ISO
6252

Second edition
1992-08-15

Plastics — Determination of environmental stress cracking (ESC) — Constant-tensile-stress method

iTeh STANDARD PREVIEW

*Plastiques — Détermination de la fissuration sous contrainte dans un
environnement donné (ESC) — Méthode sous contrainte de traction
constante*

[SIST EN ISO 6252:2000](https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-a313308e5d39/sist-en-iso-6252-2000)

[https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-
a313308e5d39/sist-en-iso-6252-2000](https://standards.iteh.ai/catalog/standards/sist/5bdb2892-fe7c-4ce2-8d35-a313308e5d39/sist-en-iso-6252-2000)



Reference number
ISO 6252:1992(E)

ISO 6252:1992(E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 6252 was prepared by Technical Committee ISO/TC 61, *Plastics*, Sub-Committee SC 6, *Ageing, chemical and environmental resistance*.

This second edition cancels and replaces the first edition (ISO 6252:1981), which has been revised to include a third method (method C).

Annex A of this International Standard is for information only.

© ISO 1992

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Introduction

Environmental stress cracking is exhibited by many materials, including plastics. When a plastic material is stressed or strained in air below its yield point, stress cracking can occur after a period of time, which may be very long. These stresses may be internal or external, or a combination of both. Exposure to a chemical environment simultaneously with the same stress or strain may result in a dramatic shortening of the time to failure. This phenomenon is referred to as environmental stress cracking (ESC). The permissible long-term stress or strain may be reduced considerably by this phenomenon.

The cracks produced may penetrate completely through the thickness of the material, separating it into two or more pieces, or they may be arrested on reaching regions of lower stress or different material morphology.

The determination of ESC is complex because it is influenced by many parameters, including:

- test specimen dimensions;
- test specimen state (orientation, structure, internal stresses);
- stress and strain;
- temperature of test;
- duration of test;
- chemical environment;
- test method;
- failure criterion.

By keeping all but one parameter constant, the influence of the variable parameter on ESC can be assessed. The main objective of ESC measurements is to determine the effect of chemical media (environment) on plastics (test specimens and articles). The measurements may also be used to evaluate the influence of the moulding conditions upon the quality of an article when the failure mode corresponds to that obtained in actual service. It may not be possible, however, to establish any direct correlation between the results of short-duration ESC measurements on test specimens and the actual service behaviour of articles, because the behaviour of the latter is likely to be more complex than that of test specimens.