



NSAI
Standards

Irish Standard
I.S. EN ISO 22088-5:2009

Plastics - Determination of resistance to environmental stress cracking (ESC) - Part 5: Constant tensile deformation method (ISO 22088-5:2006)

I.S. EN ISO 22088-5:2009

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English Version

Plastics - Determination of resistance to environmental stress
cracking (ESC) - Part 5: Constant tensile deformation method
(ISO 22088-5:2006)

Plastiques - Détermination de la fissuration sous contrainte
dans un environnement donné (ESC) - Partie 5: Méthode
de déformation en traction constante (ISO 22088-5:2006)

Kunststoffe - Bestimmung der Beständigkeit gegen
umgebungsbedingte Spannungsrissbildung (ESC) - Teil 5:
Verfahren mit konstanter Zugverformung (ISO 22088-
5:2006)

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Foreword

The text of ISO 22088-5:2006 has been prepared by Technical Committee ISO/TC 61 "Plastics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 22088-5:2009 by Technical Committee CEN/TC 249 "Plastics" the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by December 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

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I.S. EN ISO 22088-5:2009

INTERNATIONAL STANDARD

ISO 22088-5

First edition
2006-08-01

Plastics — Determination of resistance to environmental stress cracking (ESC) —

Part 5:

Constant tensile deformation method

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

Partie 5: Méthode de déformation en traction constante



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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.

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ISO 22088-5 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 6, *Ageing, chemical and environmental resistance*.

ISO 22088 consists of the following parts, under the general title *Plastics — Determination of resistance to environmental stress cracking (ESC)*:

- *Part 1: General guidance*
- *Part 2: Constant tensile load method* (replacement of ISO 6252:1992)
- *Part 3: Bent strip method* (replacement of ISO 4599:1986)
- *Part 4: Ball or pin impression method* (replacement of ISO 4600:1992)
- *Part 5: Constant tensile deformation method* (new test method)
- *Part 6: Slow strain rate method* (new test method)

Plastics — Determination of resistance to environmental stress cracking (ESC) —

Part 5: Constant tensile deformation method

1 Scope

This part of ISO 22088 specifies a method for the determination of the environmental stress cracking (ESC) behaviour of thermoplastics when they are subjected to a constant tensile deformation in the presence of a chemical medium.

It is applicable to test specimens prepared by moulding and/or machining and can be used for the assessment of the ESC behaviour of plastic materials exposed to different environments, as well as for the determination of the ESC behaviour of different plastic materials exposed to a specific environment.

This is essentially a ranking test and is not intended to provide data to be used for design or performance prediction.

NOTE Alternative methods for the determination of environmental stress cracking by means of a constant-strain test are specified in ISO 22088-3 and ISO 22088-4. A method for the determination of environmental stress cracking by means of a constant tensile load is specified in ISO 22088-2.

2 Normative references

The following referenced documents are indispensable for the application 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 293, *Plastics — Compression moulding of test specimens of thermoplastic materials*

ISO 294-1, *Plastics — Injection moulding of test specimens of thermoplastic materials — Part 1: General principles, and moulding of multipurpose and bar test specimens*

ISO 294-5, *Plastics — Injection moulding of test specimens of thermoplastic materials — Part 5: Preparation of standard specimens for investigating anisotropy*

ISO 527-2, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics*

ISO 2818, *Plastics — Preparation of test specimens by machining*

ISO 22088-1:2006, *Plastics — Determination of resistance to environmental stress cracking (ESC) — Part 1: General guidance*

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