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

ICS 83.080.01

Descriptors : plastics, chemical-resistance tests, tensile testing, tensile loading, cracking

Reference number : JIS K 7108 : 1999 (E)

K 7108 : 1999 (ISO 6252 : 1992)

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently **JIS K 7108 : 1987** is replaced with **JIS K 7108 : 1999**.

This revision has been prepared based on **ISO 6252 : 1992** in order to conform to the International Standard.

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In the event of any doubts arising as to the contents,
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Plastics—Determination of environmental stress cracking (ESC)— Constant-tensile-stress method

Introduction This Japanese Industrial Standard has been prepared based on the second edition of **ISO 6252** *Plastics—Determination of environmental stress cracking (ESC)—Constant-tensile-stress method*, published in 1992 without changing the technical contents.

The portion underlined with dots and annex 1 (informative) are not specified in the original International Standard.

1 Scope This Standard specifies methods for the determination of environmental stress cracking (ESC) of plastics when they are subjected to a constant tensile force in the presence of chemical agents.

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

NOTE 1 Methods for the determination of environmental stress cracking by means of a constant-strain test are specified in **ISO 4599** and **ISO 4600**.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. If the indication of the year of coming into effect or the year of publication is given to these referred standards, only the edition of indicated year constitutes the provision of this Standard but the revision and amendment made thereafter are not applied. The normative references without the indication of the year of coming into effect or the year of publication apply limiting only to the most recent edition (including the amendment).

JIS K 7139 : 1996 *Plastics—Multipurpose test specimens*

Remarks: **ISO 3167** : 1993 *Plastics—Multipurpose test specimens* is identical with the said standard.

JIS K 7151 : 1995 *Plastics—Compression moulding test specimens of thermoplastic materials*

Remarks: **ISO 293** : 1986 *Plastics—Compression moulding test specimen of thermoplastic materials* is identical with the said standard.

JIS K 7152 : 1995 *Plastics—Injection moulding of test specimens of thermoplastic materials*

Remarks: **ISO 294** : 1995 *Plastics—Injection moulding test specimen of thermoplastic materials* is identical with the said standard.

JIS K 7162 : 1994 *Plastics—Determination of tensile properties—Part 2 : Test conditions for moulding and extrusion plastics*

Remarks: **ISO 527-2** : 1993 *Plastics—Determination of tensile properties—Part 2 : Test conditions for moulding and extrusion plastics* is identical with the said standard.