

BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा

प्लास्टिक — परीक्षण पद्धतियाँ

भाग 8 स्थायी /रासायनिक गुणधर्म

अनुभाग XX पर्यावरणीय तनाव -भंजक (ई. एस. सी.) प्रतिरोध का निर्धारण — सतत तन्वयता विरूपण
पद्धति

Draft Indian Standard

PLASTICS — METHODS OF TESTING

PART 8 PERFORMANCE/CHEMICAL PROPERTIES

**SECTION XX DETERMINATION OF RESISTANCE TO ENVIRONMENTAL
STRESS CRACKING (ESC) — CONSTANT TENSILE DEFORMATION METHOD**

(ICS 83.080.01)

Methods of Sampling and Test for Plastics
Sectional Committee, PCD 27

Last date for receipt of comment is
01 July 2024

NATIONAL FOREWORD

(Formal clauses will be added later).

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

Other parts in this series are:

- Part 1 General guidance
- Part 2 Constant tensile load method
- Part 3 Bent strip method
- Part 4 Ball or pin impression method
- Part 6 Slow strain rate method

In this adopted standard, reference appears to certain International Standard for which Indian Standard also exist. The corresponding Indian Standard, which is to be substituted in their respective places, is listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 293, Plastics — Compression moulding of test specimens of thermoplastic materials	IS 13360 (Part 2/Sec 1) : 2016 / ISO 293 : 2004 Plastics — Methods of testing: Part 2 Sampling and preparation of test specimens, Section 1 Plastics — Compression moulding of test specimens of thermoplastic materials (<i>first revision</i>)	Identical
ISO 294-1, Plastics — Injection moulding of test specimens of thermoplastic materials — Part 1: General principles, and moulding of multipurpose and bar test specimens	IS 13360 (Part 2/Sec 3) : 2019 / ISO 294-1 : 2017 Plastics — Methods of testing: Part 2 Sampling and preparation of test specimens, Section 3 Injection moulding of test specimens of thermoplastic materials — General principles and moulding of multipurpose and bar test specimens (<i>first revision</i>)	Identical
ISO 527-2, Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics	IS 13360 (Part 5/Sec 2) : 2017 / ISO 527-2 : 2012 Plastics — Methods of testing: Part 5 Mechanical properties, Section 2 Determination of tensile properties — Test conditions for moulding and extrusion plastics (<i>first revision</i>)	Identical
ISO 2818, Plastics — Preparation of test specimens by machining	IS 13360 (Part 2/Sec 4) : 2021/ ISO 2818: 2018 Plastics — Methods of testing: Part 2 Sampling and preparation of test specimens, Section 4 Preparation of test specimens by machining (<i>second revision</i>)	Identical
ISO 22088-1 : 2006 Plastics — Determination of resistance to environmental stress cracking (ESC) — Part 1: General guidance	PCD/27/25518 Plastics — Methods of testing : Part 8 Performance/Chemical properties, Section XX Determination of resistance to Environmental Stress Cracking (ESC) — General guidance	Identical

The technical committee has reviewed the provisions of the following International Standards referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard:

<i>International Standard</i>	<i>Title</i>
ISO 294-5	Plastics — Injection moulding of test specimens of thermoplastic materials — Part 5: Preparation of standard specimens for investigating anisotropy

For tropical countries like India, the standard temperature and the relative humidity shall be taken as 27 ± 2 °C and 65 ± 5 percent respectively.

In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'.

NOTE — The technical content of this document has not been enclosed as this is identical with the corresponding ISO Standard. For details, please refer to ISO 22088-5 : 2006 or kindly contact:

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