
**Plastics — Polycarbonate (PC) moulding
and extrusion materials —**

**Part 2:
Preparation of test specimens and
determination of properties**

Plastiques — Polycarbonate (PC) pour moulage et extrusion —

Partie 2: Préparation des éprouvettes et détermination des propriétés



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 7391-2 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

This third edition cancels and replaces the second edition (ISO 7391-2:1996), which has been technically revised.

ISO 7391 consists of the following parts, under the general title *Plastics — Polycarbonate (PC) moulding and extrusion materials*:

- *Part 1: Designation system and basis for specifications*
- *Part 2: Preparation of test specimens and determination of properties*

Plastics — Polycarbonate (PC) moulding and extrusion materials —

Part 2:

Preparation of test specimens and determination of properties

1 Scope

This part of ISO 7391 specifies the methods of preparation of test specimens and the test methods to be used in determining the properties of polycarbonate moulding and extrusion materials. Requirements for handling test material and for conditioning both the test material before moulding and the specimens before testing are given here.

Procedures and conditions for the preparation of test specimens and procedures for measuring properties of the materials from which these specimens are made are given. Properties and test methods which are suitable and necessary to characterize polycarbonate moulding and extrusion materials are listed.

The properties have been selected from the general test methods in ISO 10350-1. Other test methods in wide use for or of particular significance to these moulding and extrusion materials are also included in this part of ISO 7391, as are the designatory properties specified in Part 1.

In order to obtain reproducible and comparable test results, it is necessary to use the methods of preparation and conditioning, the specimen dimensions and the test procedures specified herein. Values determined will not necessarily be identical to those obtained using specimens of different dimensions or prepared using different procedures.

2 Conformance

In Clause 3, the year of publication of each normative reference has been specifically stated. In order to be able to claim conformity with this part of ISO 7391, it is essential that the user use only those editions given, and not earlier or more recent editions.

3 Normative references

ISO 62:1999, *Plastics — Determination of water absorption*

ISO 75-2:2004, *Plastics — Determination of temperature of deflection under load — Part 2: Plastics and ebonite*

ISO 178:2001, *Plastics — Determination of flexural properties*

ISO 179-1:2000, *Plastics — Determination of Charpy impact properties — Part 1: Non-instrumented impact test*

ISO 180:2000, *Plastics — Determination of Izod impact strength*

ISO 291:2005, *Plastics — Standard atmospheres for conditioning and testing*

ISO 293:2004, *Plastics — Compression moulding of test specimens of thermoplastic materials*

ISO 294-1:1996, *Plastics — Injection moulding of test specimens of thermoplastic materials — Part 1: General principles, and moulding of multipurpose and bar test specimens*

ISO 306:2004, *Plastics — Thermoplastic materials — Determination of Vicat softening temperature (VST)*

ISO 527-2:1993, *Plastics — Determination of tensile properties — Part 2: Test conditions for moulding and extrusion plastics*

ISO 899-1:2003, *Plastics — Determination of creep behaviour — Part 1: Tensile creep*

ISO 1133:1997, *Plastics — Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics*

ISO 1183-1:2004, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method*

ISO 1628-4:1999, *Plastics — Determination of the viscosity of polymers in dilute solution using capillary viscometers — Part 4: Polycarbonate (PC) moulding and extrusion materials*

ISO 2818:1994, *Plastics — Preparation of test specimens by machining*

ISO 3167:2002, *Plastics — Multipurpose test specimens*

ISO 4589-2:1996, *Plastics — Determination of burning behaviour by oxygen index — Part 2: Ambient-temperature test*

ISO 7391-1, *Plastics — Polycarbonate (PC) moulding and extrusion materials — Part 1: Designation system and basis for specifications*

ISO 10350-1:1998, *Plastics — Acquisition and presentation of comparable single-point data — Part 1: Moulding materials*

ISO 11357-2:1999, *Plastics — Differential scanning calorimetry (DSC) — Part 2: Determination of glass transition temperature*

ISO 11359-2:1999, *Plastics — Thermomechanical analysis (TMA) — Part 2: Determination of coefficient of linear thermal expansion and glass transition temperature*

IEC 60093:1980, *Methods of test for volume resistivity and surface resistivity of solid electrical insulating materials*

IEC 60112:2003, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60243-1:1998, *Electrical strength of insulating materials — Test methods — Part 1: Tests at power frequencies*

IEC 60250:1969, *Recommended methods for the determination of the permittivity and dielectric dissipation factor of electrical insulating materials at power, audio and radio frequencies including metre wavelengths*

IEC 60296:2003, *Fluids for electrotechnical applications — Unused mineral insulating oils for transformers and switchgear*

IEC 60695-11-10:2003, *Fire hazard testing — Part 11-10: Test flames — 50 W horizontal and vertical flame test methods*