
**Thermoplastics pipes, fittings and
assemblies for the conveyance of
fluids — Determination of the resistance
to internal pressure —**

**Part 2:
Preparation of pipe test pieces**

*Tubes, raccords et assemblages en matières thermoplastiques pour le
transport des fluides — Détermination de la résistance à la pression
interne —*

Partie 2: Préparation des éprouvettes tubulaires



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Contents

Page

Foreword.....	iv
1 Scope	1
2 Normative references	1
3 Principle.....	1
4 Apparatus.....	2
5 Test pieces	2
5.1 Extruded test pieces.....	2
5.2 Injection-moulded tubular test pieces.....	2
5.3 Measurement of dimensions	2
6 Test report.....	2
Bibliography	4

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 1167-2 was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications*.

This first edition of ISO 1167-2, together with ISO 1167-1, cancels and replaces ISO 1167:1996 and, together with ISO 1167-3, cancels and replaces ISO 12092:2000 of which it constitutes a technical revision.

ISO 1167 consists of the following parts, under the general title *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure*:

- *Part 1: General method*
- *Part 2: Preparation of pipe test pieces*
- *Part 3: Preparation of components*
- *Part 4: Preparation of assemblies*

Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure —

Part 2: Preparation of pipe test pieces

1 Scope

This part of ISO 1167 specifies the dimensions and method for preparation of extruded, or injection-moulded tubular, test pieces used to determine the resistance of thermoplastics pipes to internal hydrostatic pressure according to ISO 1167-1.

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 1167-1:2006, *Thermoplastics pipes, fittings and assemblies for the conveyance of fluids — Determination of the resistance to internal pressure — Part 1: General method*

ISO 3126, *Plastics piping systems — Plastics components — Determination of dimensions*

3 Principle

Pipe test pieces may be obtained by extrusion or injection-moulding. The extruded test pieces are used for material and pipe testing, whereas the injection-moulded tubular test pieces are used for testing injection moulding materials only.

The injection-moulded tubular test pieces make it possible to determine the time-related behaviour of the injection moulding material for fittings under hydrostatic pressure and under the same conditions as specified for extruded pipes. It is possible to extrapolate the results in accordance with a method such as that specified in ISO 9080 in order to determine the MRS (minimum required strength) and to classify the material using ISO 12162. The tubular test pieces also make it possible to verify individual points on previously established stress/time regression curves as a minimum material test requirement.

NOTE If the compound used for the injection-moulding of components can also be extruded, then its time-related behaviour can be investigated using either injection-moulded or extruded tubular test pieces.

After conditioning, test pieces consisting of a portion of pipe sufficient to provide the required free length as a function of the diameter of the pipe are subjected to a specified internal hydrostatic pressure or stress for a specified period of time or until the test piece(s) fail(s), in accordance with ISO 1167-1.

The number of test pieces, conditioning and details of the test report are given in ISO 1167-1.