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**Plastics piping and ducting systems —  
Thermoplastics pipes — Determination of  
ring flexibility**

*Systèmes de canalisations et de gaines en matières plastiques —  
Tubes en matières thermoplastiques — Détermination de la flexibilité  
annulaire*



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## Foreword

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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 13968 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 second edition cancels and replaces the first edition (ISO 13968:1997), which has been technically revised.

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# Plastics piping and ducting systems — Thermoplastics pipes — Determination of ring flexibility

## 1 Scope

This International Standard specifies a method for testing the ring flexibility of a thermoplastics pipe having a circular cross-section.

The method enables determination of the deflection, and necessary force, at which physical damage, if any, occurs within the specified diametric deflection.

## 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 9969, *Thermoplastics pipes — Determination of ring stiffness*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **ring flexibility**

ability of a pipe to resist ring diametric deflection without loss of structural integrity

[EN 13476-1:2007, 3.1.2.10]

## 4 Principle

The ring flexibility of a pipe is tested by measuring the force and the deflection while deflecting a ring section from the pipe diametrically at a constant speed until at least the specified deflection is achieved or prior fracture has occurred.

Each test piece is monitored during testing and subsequently inspected for signs of several specific types of mechanical failure.

**NOTE** It is assumed that the following test parameters are set by the standard making reference to this International Standard:

- a) if appropriate, a greater length of the test pieces than the length specified in ISO 9969, see Clause 6;
- b) the deflection, if appropriate, see 8.1.