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**Termoplasttorud. Ringjäikuse määramine**

Thermoplastics pipes - Determination of ring stiffness

**EESTI STANDARDI EESSÕNA****NATIONAL FOREWORD**

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**Võtmesõnad:** jäikusteimid, plasttooted, plasttorud, termoplastvaik, testimine, ümmargune kuju

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EUROPEAN STANDARD  
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English Version

Thermoplastics pipes - Determination of ring stiffness (ISO 9969:2007)

Tubes en matières thermoplastiques - Détermination de la rigidité annulaire (ISO 9969:2007)

Thermoplastische Rohre - Bestimmung der Ringsteifigkeit (ISO 9969:2007)

This European Standard was approved by CEN on 7 December 2007.

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## Foreword

This document (EN ISO 9969:2007) has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" in collaboration with Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2008, and conflicting national standards shall be withdrawn at the latest by June 2008.

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### Endorsement notice

The text of ISO 9969:2007 has been approved by CEN as a EN ISO 9969:2007 without any modification.

# Thermoplastics pipes — Determination of ring stiffness

## 1 Scope

This International Standard specifies a test method for determining the ring stiffness of thermoplastics pipes having a circular cross section.

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

## 3 Symbols

For the purposes of this document, the following symbols apply.

	Units
$d_n$	nominal diameter of pipe
$d_i$	inside diameter of pipe
$e_c$	construction height
$F$	force (of loading)
$L$	length of the test piece
$p$	pitch of ribs or windings
$S$	ring stiffness
$y$	vertical deflection

## 4 Principle

The ring stiffness is determined by measuring the force and the deflection while deflecting the pipe at a constant deflection speed.

A cut length of pipe supported horizontally is compressed vertically between two parallel flat plates moved at a constant speed that is dependent upon the diameter of the pipe.

A plot of force versus deflection is generated. The ring stiffness is calculated as a function of the force necessary to produce a 3 % diametric deflection of the pipe.

NOTE It is assumed that the test temperature is set by the referring standard, if appropriate (see 8.1).