Plastics piping systems - Mechanical joints between fittings and pressure pipes - Test method for resistance to pull-out under constant longitudinal force (ISO 3501:2015)



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# EUROPEAN STANDARD NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

**EN ISO 3501** 

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#### **English Version**

Plastics piping systems - Mechanical joints between fittings and pressure pipes - Test method for resistance to pull-out under constant longitudinal force (ISO 3501:2015)

Systèmes de canalisations en plastique - Assemblages mécaniques entre raccords et tubes sous pression -Méthode d'essai de résistance à l'arrachement sous une force longitudinale constante (ISO 3501:2015) Kunststoff-Rohrleitungssysteme - Mechanische Verbindungen zwischen Fittings und Druckrohren -Prüfverfahren für den Widerstand gegen Zugbelastung bei konstanter Zugkraft (Ausreißprüfung) (ISO 3501:2015)

This European Standard was approved by CEN on 7 February 2015.

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#### **Foreword**

This document (EN ISO 3501:2015) 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of an identical text or by endorsement, at the latest by September 2015, and conflicting national standards shall be withdrawn at the latest by September 2015.

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The text of ISO 3501:2015 has been approved by CEN as EN ISO 3501:2015 without any modification.

CO	ntents	Page
Fore	eword	iv
1	Scope	1
2	Normative references	1
3	Principle	1
4	Test parameters and requirements	1
5	Apparatus	2
6	Test pieces	2
7	Procedure	3
8	Test report	3
	nex A (normative) Test parameters	
© ISO	O 2015 – All rights reserved	iii

# Plastics piping systems — Mechanical joints between fittings and pressure pipes — Test method for resistance to pull-out under constant longitudinal force

WARNING — Persons using this document should be familiar with normal laboratory practice, if applicable. The use of this International Standard can involve hazardous materials, operations, and equipment. This International Standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

# 1 Scope

This International Standard specifies a method for checking the ability of assembled uniaxial joints between fittings and plastic pressure pipes to withstand longitudinal tensile stresses. The test applies regardless of the design and material of the fitting used for jointing plastics pipe.

This test method is not applicable to fusion-welded joints.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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

ISO 17456:2006, Plastics piping systems — Multilayer pipes — Determination of long-term strength

# 3 Principle

An assembled joint is subjected to a longitudinal tensile force calculated as a function of the pipe dimensions and the maximum permissible induced hoop stress of the relevant pipe.

# 4 Test parameters and requirements

The test parameters of the standard which refers to this International Standard shall be used and the requirements shall be fulfilled. If one or more parameters are not given in the referring International Standard, the ones given in <a href="#">Annex A</a> shall apply.

The following test parameters should be given by the standard which refers to this International Standard:

- a) pull-out force (N);
- b) test duration (h);
- c) test temperature (°C);
- d) free length (mm).