

**Tihendusmaterjalid metallist  
keermesühendustele kontaktis 1., 2. ja 3.  
põlvkonna gaasidega ja kuuma veega. Osa  
3: Kuumutamata PTFE teibid**

Sealing materials for metallic threaded joints in  
contact with 1st, 2nd and 3rd family gases and hot  
water - Part 3: Unsintered PTFE tapes

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 751-3:1999 sisaldab Euroopa standardi EN 751-3:1996 + AC:1997 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.11.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 751-3:1999 consists of the English text of the European standard EN 751-3:1996 + AC:1997.</p> <p>This document is endorsed on 23.11.1999 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>Käesolev Euroopa standard määrab kindlaks nõuded ja testimismeetodid kuumutamata polütetrafluoroetüleenist (PTFE) teipidele (edaspidi nimetatud kui PTFE-teibid), mis on sobivad metallist keermesühenduste tihendamiseks, mis vastavad standardi ISO 7-1 nõuetele. Neid PTFE-teipe kasutatakse põhiliselt paigaldistes, kus esineb kokkupuude 1. põlvkonna gaaside (majapidamisgaas), 2. põlvkonna gaaside (maagaas) ja 3. põlvkonna gaasidega (veeldatud naftagaasid (LPG)), mille surve on kuni 5 baari, ning küttesüsteemide kuuma veega, mille surve on kuni 7 baari. Neid teipe võib kasutada ka gaasiseadmetes ja nende abiseadmetes, mille surve on kuni 0,2 baari.</p>	<p><b>Scope:</b></p>
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ICS 23.040.80

**Võtmesõnad:** efektiivsus, gaasitorud, keermesliitmikud, kuum vesi, liigitused, mõõtmete määramised, mõõtmetolerantsid, märgistus, tehnilised andmed, teibid, testimine, tihendusmaterjalid, toruliitmikud, veetorud

ICS 21.140; 23.040.80

Descriptors: Gas pipes, sealing materials, threaded joints, PTFE tape.

**English version**

**Sealing materials for metallic threaded joints in  
contact with 1st, 2nd and 3rd family gases  
and hot water**

**Part 3: Unsintered PTFE tapes  
(including Corrigendum AC : 1997)**

Matériaux d'étanchéité pour raccords  
filetés en contact des gaz de la 1ère,  
2ème et 3ème famille et de l'eau  
chaude – Partie 3: Bandes en PTFE  
non fritté (Corrigendum AC : 1997  
inclus)

Dichtmittel für metallene Gewindever-  
bindungen in Kontakt mit Gasen der  
1., 2. und 3. Familie und Heißwasser –  
Teil 3: Ungesinterte PTFE-Bänder  
(enthält Berichtigung AC : 1997)

This European Standard was approved by CEN on 1996-11-24.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 108 'Sealing materials and lubricants for gas appliances and gas equipment', the Secretariat of which is held by NNI.

This European Standard comprises the following Parts:

Part 1 Anaerobic jointing compounds

Part 2 Non-hardening jointing compounds

Part 3 Unsintered PTFE tapes

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association and supports essential requirements of the relevant EU Directives.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by June 1997 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

## Introduction

This European Standard specifies requirements and test methods for tapes produced from virgin unsintered polytetrafluorethylene (PTFE) for use with metallic threaded joints. It defines two classes of PTFE tapes - mainly differing in thickness and mass per area - for fine (F) and coarse (G) threads.

A universally applicable PTFE tape may be used for all gas, potable water, and hot water installation.

In respect of potential adverse effects of the jointing compounds covered by this European Standard on the quality of water intended for human consumption this Standard provides no information as to whether the jointing compounds may be used without restriction in any of the Member States of the EU or EFTA. The use and characteristics of the jointing compounds should comply with current regulations, where they exist, depending on the acceptance of verifiable European criteria.

Since the application techniques - sometimes due to different pressure limits and safety requirements - differ from country to country, it was rather difficult to harmonize the existing national standards and approval requirements for PTFE tapes. One particular point relates to the adjustment of parts of an installation which sometimes require the assembled taper/parallel threaded joints to be turned back up to an angle of 45 °. To ensure that PTFE tapes fulfil this requirement in countries where such handling techniques are used, an additional requirement concerning the turn back test was included and such PTFE tapes are additionally designated with 'Rp'.

## 1 Scope

This European Standard specifies requirements and test methods for unsintered polytetrafluorethylene (PTFE) tapes (PTFE tapes, for short) which are suitable for sealing threaded metallic joints as specified in ISO 7-1.

This European Standard covers two classes of PTFE tapes suitable for fine (F) and coarse (G) threads. The PTFE tapes are typically for use in installations for 1st family gases (town gas), 2nd family gases (natural gas) and 3rd family gases (liquefied petroleum gases (LPG)) up to 5 bar, up to 7 bar for hot water of heating systems, and up to 0,2 bar in gas appliances and their auxiliary equipment. The maximum working pressure covered in this European Standard is 20 bar which is relevant to LPG storage. The temperature range is limited to -20 °C to 125 °C.

NOTE: For applications outside the scope of this standard (e.g. compressed gases), the purchaser should consult the manufacturer.

Anaerobic jointing compounds are covered by EN 751-1, non-hardening sealing materials (e.g. in the form of jointing compound paste) are covered by EN 751-2.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ISO 7-1	<i>Pipe threads where pressure-tight joints are made on the threads - Part 1: Dimensions, tolerances and designation</i>
ISO 228-1	<i>Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation</i>
EN 437	<i>Test gases - Test pressures - Appliance categories</i>
EN 10242	<i>Threaded pipe fittings in malleable cast iron</i>
prEN 10255	<i>Carbon steel tubes suitable for welding or threading</i>
prEN 12164	<i>Copper and copper alloys - Rod for free machining purposes</i>

## 3 Definitions

For the purposes of this European Standard the following definitions apply:

**3.1 PTFE tape** : Thread sealing tape manufactured from virgin unsintered polytetrafluorethylene (PTFE) without fillers or additives.

**3.2 gas family** : For further information on types of gases see EN 437.