



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 13380:2001

ICS 93.030

**GENERAL REQUIREMENTS FOR  
COMPONENTS USED FOR RENOVATION  
AND REPAIR OF DRAIN AND SEWER  
SYSTEMS OUTSIDE BUILDINGS**

National Standards  
Authority of Ireland  
Dublin 9  
Ireland

Tel: (01) 807 3800  
Tel. (01) 807 3838

*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland  
and comes into effect on.  
November 3, 2001*

**NO COPYING WITHOUT NSAI  
PERMISSION EXCEPT AS  
PERMITTED BY COPYRIGHT  
LAW**

© NSAI 2001

**Price Code G**

Údarás um Chaighdeáin Náisiúnta na hÉireann



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 13380**

May 2001

ICS 93.030

English version

**General requirements for components used for renovation and  
repair of drain and sewer systems outside buildings**

Prescriptions générales pour les composants utilisés pour  
la rénovation et la réparation des branchements et des  
réseaux d'assainissement à l'extérieur des bâtiments

Allgemeine Anforderungen an Bauteile für Renovierung und  
Reparatur von Abwasserleitungen und -kanalen außerhalb  
von Gebäuden

*This European Standard was approved by CEN on 23 March 2001.*

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 Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## CONTENTS

	page
<b>Foreword</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>3</b>
<b>1 Scope</b> .....	<b>4</b>
<b>2 Normative references</b> .....	<b>4</b>
<b>3 Terms, definitions, symbols and abbreviations</b> .....	<b>5</b>
<b>4 Installation techniques</b> .....	<b>7</b>
<b>5 Product stages "M"-stage and "I"-stage</b> .....	<b>7</b>
<b>6 General requirements</b> .....	<b>7</b>
6.1 General .....	7
6.2 Dimensions .....	7
6.3 Geometry .....	8
6.4 Smoothness of bore, appearance and soundness.....	8
6.5 Watertightness .....	8
6.6 Temperature.....	8
6.7 Corrosion resistance .....	8
6.8 Abrasion resistance.....	8
6.9 Load bearing capacity and stiffness .....	9
6.10 Dimensional stability .....	9
6.11 Long-term behaviour .....	9
6.12 Durability .....	9
6.13 Sealing elements.....	9
6.14 Fitness for installation .....	9
6.14.1 Resistance to installation forces.....	9
6.14.2 Additional requirements .....	10
<b>7 Specimen for testing</b> .....	<b>10</b>
<b>8 General test methods</b> .....	<b>10</b>
8.1 General .....	10
8.2 Measurement of diameters and wall thicknesses .....	10
8.2.1 Mean internal diameter of barrels .....	10
8.2.2 Mean external diameter of barrels.....	10
8.2.3 Wall thickness of barrels.....	10
8.3 Measurement of deviation from geometry.....	10
8.3.1 Straightness of the components.....	10
8.3.2 Squareness of the ends of the components.....	10
8.4 Testing of smoothness of bore, appearance and soundness .....	11
8.5 Watertightness test .....	11
8.6 Crushing and stiffness test.....	11
8.6.1 Crushing test.....	11
8.6.2 Stiffness test.....	11
8.7 Tests for fitness for installation.....	12
8.7.1 Test for installation forces resistance.....	12
8.7.2 Test for additional requirements.....	12
<b>9 Quality control</b> .....	<b>12</b>
<b>10 Marking</b> .....	<b>12</b>
<b>ANNEX A (informative) The following chart gives examples of rehabilitation techniques for pipelines</b> .....	<b>13</b>
<b>ANNEX B (informative) Examples of components and materials used for repair and renovation which do "change" and which do "not change", respectively, their properties from "M"-stage to "I"-stage:</b> .....	<b>14</b>
<b>ANNEX C (informative) Examples for requirements to be tested regarding the system of renovation-/ repair techniques ("M"-stage and/or "I"-stage)</b> .....	<b>15</b>
<b>Bibliography</b> .....	<b>16</b>

## Foreword

This European Standard has been prepared by Technical Committee of CEN/TC 165 "Waste water engineering", the secretariat of which is held by DIN.

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 November 2001, and conflicting national standards shall be withdrawn at the latest by November 2001.

This European Standard provides the basis for the preparation or revision of product standards for components and materials used for renovation and repair of drain and sewer systems (see clause 1 "Scope").

The annexes A, B and C are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

This European Standard was derived from EN 476. As far as possible the same wording has been used.

## 1 Scope

This European Standard specifies general requirements and general test methods for

- components such as pipes and fittings with their respective joints, manholes, inspection chambers and
- materials such as mortar and chemicals all intended to be used for repair and renovation of drain and sewer systems.

These drain and sewer systems generally operate as gravity drainage systems where any pressure likely to occur is a maximum of 40 kPa and which are generally buried.

This European Standard provides the general basis for the preparation and revision of voluntary product standards. It is not applicable for evaluation of products.

It applies as a reference for drawing up a product specification, if there is no product standard available.

This European Standard includes quality control and optional certification requirements.

It applies to components those used in systems that convey in a satisfactory manner:

- domestic wastewater;
- rainwater and surface water; and
- other waste waters (e.g. industrial waste water) that will not damage the components.

This European Standard applies to components of circular and other cross sections.

This European Standard applies equally to components which are factory-made and to those manufactured on site, where applicable.

## 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 (including amendments).

EN 476	General requirements for components used in discharge pipes, drains and sewers for gravity systems
EN 752-1	Drain and sewer systems outside buildings – Part 1: Generalities and definitions
EN 752-5	Drain and sewer systems outside buildings - Part 5: Rehabilitation
EN 45011:1998	General requirements for bodies operating product certification systems (ISO/IEC Guide 65:1996)
EN 45012:1998	General requirements for bodies operating assessment and certification/registration of quality systems (ISO/IEC Guide 62:1996)
ISO 48 : 1994	Rubber, vulcanized or thermoplastic – Determination of hardness (hardness between 10 IRHD an 100 IRHD)

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-