



NSAI
Standards

Irish Standard
I.S. EN 14364:2013

Plastics piping systems for drainage and sewerage with or without pressure - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) - Specifications for pipes, fittings and joints

I.S. EN 14364:2013

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Údarás um Chaighdeáin Náisiúnta na hÉireann

English Version

Plastics piping systems for drainage and sewerage with or without pressure - Glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) - Specifications for pipes, fittings and joints

Systèmes de canalisations en plastique pour l'évacuation et l'assainissement avec ou sans pression - Plastiques thermodurcissables renforcés de verre (PRV) à base de résine de polyester non saturé (UP) - Spécifications pour tubes, raccords et assemblages

Kunststoff-Rohrleitungssysteme für Abwasserleitungen und -kanäle mit oder ohne Druck - Glasfaserverstärkte duroplastische Kunststoffe (GFK) auf der Basis von ungesättigtem Polyesterharz (UP) - Festlegungen für Rohre, Formstücke und Verbindungen

This European Standard was approved by CEN on 14 December 2012.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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Contents

Page

Foreword.....	5
Introduction	6
1 Scope.....	7
2 Normative references.....	8
3 Terms, definitions and symbols	9
4 General requirements	17
4.1 Classification.....	17
4.1.1 General	17
4.1.2 Categories	17
4.1.3 Nominal size	17
4.1.4 Nominal stiffness	17
4.1.5 Nominal pressure	17
4.2 Materials	18
4.2.1 General	18
4.2.2 Reinforcement.....	18
4.2.3 Resin.....	19
4.2.4 Aggregates and fillers.....	19
4.2.5 Elastomers.....	19
4.2.6 Metals.....	19
4.3 Wall construction	19
4.3.1 Inner layer.....	19
4.3.2 Structural layer.....	19
4.3.3 Outer layer	19
4.4 Appearance	20
4.5 Reference conditions for testing	20
4.5.1 Temperature	20
4.5.2 Properties of water for testing	20
4.5.3 Loading conditions	20
4.5.4 Preconditioning.....	20
4.5.5 Measurement of dimensions.....	20
4.6 Elapsed time for determination of long-term properties, (x)	20
4.7 Joints.....	20
4.7.1 General	20
4.7.2 Types of joint.....	20
4.7.3 Flexibility of the jointing system.....	21
4.7.4 Sealing ring.....	21
4.7.5 Adhesives	21
5 Pipes.....	21
5.1 Geometrical characteristics.....	21
5.1.1 Diameter.....	21
5.1.2 Wall thickness	26
5.1.3 Length.....	26
5.2 Mechanical characteristics	27
5.2.1 Initial specific ring stiffness.....	27
5.2.2 Long-term specific ring stiffness under wet conditions.....	28
5.2.3 Initial resistance to failure in a deflected condition.....	29
5.2.4 Ultimate long-term resistance to failure in a deflected condition	31

5.2.5	Initial specific longitudinal tensile strength	32
5.2.6	Initial failure and design pressures for pressure pipes	34
5.2.7	Long-term failure pressure	36
5.2.8	Resistance to strain corrosion.....	38
5.3	Marking	40
6	Fittings	41
6.1	General.....	41
6.2	Bends	42
6.2.1	Classification of bends.....	42
6.2.2	Dimensions and tolerances of bends	42
6.3	Branches.....	46
6.3.1	Classification of branches	46
6.3.2	Dimensions and tolerances of branches	47
6.4	Reducers.....	49
6.4.1	Classification of reducers	49
6.4.2	Dimensions and tolerances of reducers.....	50
6.4.3	Mechanical characteristics of tapered section laminate.....	51
6.5	Non Pressure Saddles.....	52
6.5.1	Classification of saddles.....	52
6.5.2	Dimensions and tolerances of saddles	53
6.6	Flanges	54
6.6.1	Classification of flanges.....	54
6.6.2	Dimensions and tolerances for flanged adaptors.....	55
6.7	Marking	56
7	Joint performance	57
7.1	General.....	57
7.1.1	Interchangeability	57
7.1.2	Test temperature	57
7.1.3	Non-pressure piping.....	57
7.2	Dimensions.....	57
7.3	Non-end-load-bearing flexible joints with elastomeric sealing rings.....	57
7.3.1	General.....	57
7.3.2	Requirements	57
7.3.3	Number of test pieces for type test purposes	58
7.3.4	Test pieces.....	58
7.4	End-load-bearing flexible joints with elastomeric sealing rings	59
7.4.1	General.....	59
7.4.2	Performance requirements for locked-socket-and-spigot joints with elastomeric sealing rings.....	59
7.5	Wrapped or cemented joints.....	61
7.5.1	General.....	61
7.5.2	Performance requirements	61
7.5.3	Number of test pieces for type test purposes	62
7.5.4	Test pieces.....	62
7.6	Bolted flange joints	63
7.6.1	General.....	63
7.6.2	Performance requirements	63
7.6.3	Number of test pieces for type test purposes	64
7.6.4	Test pieces.....	64
7.6.5	Joint assembly details.....	64
7.6.6	Torque resistance.....	64
Annex A	(normative) Test method for the resistance to bending and pressure of end-thrust loaded joints in pipe systems.....	66
A.1	Principle.....	66
A.2	Apparatus	66

A.3	Test pieces	66
A.4	Test temperature	67
A.5	Calculation of the bending load F	67
A.5.1	General	67
A.5.2	Calculation of F , if applied in the horizontal plane	67
A.5.3	Calculation of F , if applied in the vertical plane.....	68
A.6	Procedure	69
A.7	Test report	69
	Bibliography.....	71

Foreword

This document (EN 14364:2013) has been prepared by 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 August 2013, and conflicting national standards shall be withdrawn at the latest by August 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14364:2006+A1:2008.

The following list is a list of significant technical changes that have been made since the previous edition:

- changes to many test method references to the more up to date ISO methods;
- extension of the diameter range to 4 000 mm;
- completion of the axial strength tables for all PN classes;
- restructure of the fittings section to be more practical;
- update of the joint testing criteria.

This European Standard is a system standard for plastics piping systems using glass-reinforced thermosetting plastics based on polyester resin (GRP-UP), for drainage and sewerage with or without pressure.

System standards are based on the results of the work being undertaken in ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids", which is a Technical Committee of the International Organization for Standardization (ISO). They are supported by separate standards on test methods, to which references are made throughout the system standard.

System standards are consistent with standards on general functional requirements.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This system standard specifies the properties of a piping system and its components when made from glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) intended to be used for drainage and sewerage with or without pressure.

The working group responsible for this European Standard is currently working on a test method and requirements for assessing resistance to impact damage. When this work is completed it may result in additional requirements being incorporated into this European Standard.

This European Standard was prepared recognising the guidelines of EN 476 [1].

1 Scope

This European Standard specifies the required properties of the piping system and its components made from glass-reinforced thermosetting plastics (GRP) based on unsaturated polyester resin (UP) intended to be used for drainage or sewerage, including culverts, with or without pressure. In a pipework system, pipes and fittings of different nominal pressure and stiffness ratings may be used together.

It is the responsibility of the purchaser or specifier to make the appropriate selections taking into account their particular requirements and any relevant national regulations and installation practices or codes.

This European Standard is applicable to GRP-UP, with flexible or rigid joints (see 3.33 and 3.34), primarily intended for use in buried installations.

NOTE Piping systems conforming to this European Standard can be used also for non-buried applications provided that the influence of the environment, e.g. from UV-radiation, and the supports are considered in the design of the pipes, fittings and joints.

It is applicable to pipes, fittings and their joints of nominal sizes from DN 100 to DN 4000, which are intended to be used for the conveyance of surface water or sewage at temperatures up to 50 °C, with or without pressure.

This European Standard covers a range of nominal sizes, nominal stiffnesses and nominal pressures.

Clause 6 is applicable to fittings made using any of the following techniques:

- a) fabricated from straight pipe;
- b) moulded by:
 - 1) filament winding;
 - 2) tape winding;
 - 3) contact moulding;
 - 4) hot or cold press moulding.

This European Standard is applicable to the joints to be used in GRP-UP piping systems to be used for the conveyance of water, both buried and non-buried. It is applicable to joints, which are or are not intended to be resistant to axial loading. It covers requirements to prove the design of the joint. It specifies type test performance requirements for the following joints as a function of the declared nominal pressure rating of the pipeline or system:

- c) socket-and-spigot (either integral with pipe or sleeve coupling) or mechanical joint;
- d) locked socket-and-spigot joint;
- e) cemented or wrapped joint;
- f) bolted flange joint.

Recommended practices for the installation of buried pipes made in accordance with this standard is addressed in CEN/TS 14578. Guidelines for the structural analysis of buried GRP-UP pipelines are addressed in CEN/TS 14807.

Guidance for the Assessment of Conformity of products made in accordance with this standard is addressed in CEN/TS 14632.

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