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Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings — Styrene copolymer blends (SAN + PVC)

Systèmes de canalisations en plastique pour l'évacuation des eaux-vannes et des eaux usées (à basse et à haute température) à l'intérieur des bâtiments — Mélanges de copolymères de styrène (SAN + PVC)

Reference number
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Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms, definitions, symbols and abbreviated terms ... **2**
3.1 Symbols ... 2
3.2 Abbreviated terms ... 3

4 Material ... **3**
4.1 SAN + PVC compound ... 3
4.2 Reprocessable and recyclable material ... 3
4.3 Sealing ring retaining means ... 3
4.4 Fire behaviour ... 3

5 General characteristics ... **3**
5.1 Appearance ... 3
5.2 Colour ... 4

6 Geometrical characteristics ... **4**
6.1 General ... 4
6.2 Dimensions of pipes ... 4
6.2.1 Outside diameters ... 4
6.2.2 Effective length of pipes ... 5
6.2.3 Chamfering ... 5
6.2.4 Wall thickness ... 5
6.3 Dimensions of fittings ... 7
6.3.1 Outside diameters ... 7
6.3.2 z-lengths ... 7
6.3.3 Wall thickness ... 7
6.4 Dimensions of sockets and pipe ends ... 8
6.4.1 Classification and designation of sockets ... 8
6.4.2 Dimensions of ring seal sockets and spigot ends ... 9
6.4.3 Dimensions of solvent cement sockets and spigot ends ... 13
6.5 Types of fitting ... 14

7 Mechanical characteristics of pipes ... **22**
7.1 General characteristics ... 22
7.2 Additional characteristics ... 23

8 Physical characteristics ... **24**
8.1 Physical characteristics of pipes ... 24
8.2 Physical characteristics of fittings ... 24

9 Performance requirements ... **25**

10 Sealing rings ... **25**

11 Adhesives ... **25**

12 Marking ... **26**
12.1 General ... 26
12.2 Minimum required marking of pipes ... 26
12.3 Minimum required marking of fittings ... 26

13 Installation of piping systems ... **27**

Annex A (informative) **Additional characteristics of (SAN + PVC) pipes and fittings** ... **28**

Bibliography ... **29**

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 1, *Plastics pipes and fittings for soil, waste and drainage (including land drainage)*.

This second edition cancels and replaces the first edition (ISO 19220:2004), which has been technically revised.

The main changes compared to the previous edition are as follows:

— references to EN standards have been changed to references to ISO standards;

— Introduction has been deleted;

— symbols have been modified.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Plastics piping systems for soil and waste discharge (low and high temperature) inside buildings — Styrene copolymer blends (SAN + PVC)

1 Scope

This document specifies the requirements for solid-wall styrene copolymer blend (SAN + PVC) pipes and fittings for soil and waste discharge (low and high temperature) above ground inside buildings, and for the system itself. It does not include buried pipework.

It also specifies the test parameters for the test methods referred to within this document.

This document is applicable to SAN + PVC pipes and fittings, as well as assemblies of such pipes and fittings, intended to be used for the following purposes:

a) soil and waste discharge pipework for the conveyance of domestic waste waters (low and high temperature);

b) ventilation pipework associated with a);

c) rainwater pipework inside the building.

This document is applicable to pipes and fittings designed for jointing by means of elastomeric sealing rings, solvent cementing or integral dual-purpose sockets, i.e. for elastomeric ring seal joints and/or for solvent cement joints.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 2505, *Thermoplastics pipes — Longitudinal reversion — Test method and parameters*

ISO 2507-1, *Thermoplastics pipes and fittings — Vicat softening temperature — Part 1: General test method*

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

ISO 3127, *Thermoplastics pipes — Determination of resistance to external blows — Round-the-clock method*

ISO 4633, *Rubber seals — Joint rings for water supply, drainage and sewerage pipelines — Specification for materials*

ISO 8361-1, *Thermoplastics pipes and fittings — Water absorption — Part 1: General test method*

ISO 13254, *Thermoplastics piping systems for non-pressure applications — Test method for watertightness*

ISO 13255, *Thermoplastics piping systems for soil and waste discharge inside buildings — Test method for airtightness of joints*

ISO 13257, *Thermoplastics piping systems for non-pressure applications — Test method for resistance to elevated temperature cycling*

EN 681-2, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 2: Thermoplastic elastomers*

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EN 1411, *Plastics piping and ducting systems - Thermoplastics pipes - Determination of resistance to external blows by the staircase method*

3 Terms, definitions, symbols and abbreviated terms

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 Symbols

d_e	outside diameter (at any point)
d_{em}	mean outside diameter
d_n	nominal outside diameter
d_s	inside diameter of the socket
d_{sm}	mean inside diameter of the socket
DN	nominal size
DN/OD	nominal size (outside-diameter related)
e	wall thickness (at any point)
e_m	mean wall thickness (e_s)
e_s	wall thickness of the socket
e_g	wall thickness at the groove
l_{sz}	depth of sealing zone
l_{eff}	effective insertion depth
L_c	length of solvent cement socket
L_e	length of engagement
L_l	length of lead-in
L_p	effective length of a pipe
L_{sp}	length of spigot
L_z	design length (z-length) of a fitting
R	radius of swept fittings z
α	nominal angle of a fitting
H_{50}	drop height for 50 % failure

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