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**Cevni sistemi iz polimernih materialov za odvodnjavanje in kanalizacijo, položeni v zemljo – Polipropilen (PP) - 1. del: Zahteve za cevi, fazonske kose in cevni sistem**

Plastics piping systems for non-pressure underground drainage and sewerage - Polypropylene (PP) - Part 1: Specifications for pipes, fittings and the system

Kunststoff-Rohrleitungssysteme für erdverlegte Abwasserkanäle und -leitungen - Polypropylen (PP) - Teil 1: Anforderungen an Rohre, Formstücke und das Rohrleitungssystem

Systemes de canalisations en plastique pour les branchements et les collecteurs d'assainissement enterrés sans pression Polypropylène (PP) - Partie 1: Spécifications pour les tubes, raccords et le système

**Ta slovenski standard je istoveten z: EN 1852-1:1997/A1:2002**

**ICS:**

23.040.01

93.030

**SIST EN 1852-1:1997/A1:2003**

**en**

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ICS 23.040.01; 93.030

English version

Plastics piping systems for non-pressure underground drainage  
and sewerage - Polypropylene (PP) - Part 1: Specifications for  
pipes, fittings and the system

Systèmes de canalisations en plastique pour les  
branchements et les collecteurs d'assainissement enterrés  
sans pression - Polypropylène (PP) - Partie 1:  
Spécifications pour les tubes, raccords et le système

Kunststoff-Rohrleitungssysteme für erdverlegte  
Abwasserkanäle und -leitungen - Polypropylen (PP) - Teil  
1: Anforderungen an Rohre, Formstücke und das  
Rohrleitungssystem

This amendment A1 modifies the European Standard EN 1852-1:1997; it was approved by CEN on 30 May 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant 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 amendment 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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

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## Foreword

This Amendment EN 1852-1:1997/A1:2002 to the EN 1852-1:2002 has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NEN.

This Amendment to the European Standard EN 1852-1:2002 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2003, and conflicting national standards shall be withdrawn at the latest by February 2003.

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, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The draft Amendment contains addition of a new wall thickness series for class SN 8 (see Table 3b, Table 6b and Table 7). In A.2 a higher modulus of elasticity is specified for information. In A.3, the relation between the S-series and the ring stiffnesses are informed about.

The reason for this draft amendment is the development of a new generation of polypropylene materials having higher moduli. The moduli of elasticity on these materials are 1700 MPa or higher.

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## 1 Scope

The fourth paragraph is changed as follows, including a new note 0 (zero):

This standard covers PP materials both with normal E-moduli and with higher E-moduli, designated as HM (higher modulus), and gives a range of nominal sizes, and pipe series and gives recommendations concerning colours.

NOTE PP materials with normal E-moduli have an E-modulus between 1250 MPa and 1700 MPa; PP materials with higher moduli (PP-HM materials) have an E-modulus  $\geq$  1700 MPa.

### 3.3 Abbreviations

Add after the line "CT close tolerance" the following line:

— "PP-HM : polypropylene with high E-modulus"

### 4.1 PP compound

Add the following note:

NOTE: It is not the intention of this standard to allow fillers in order to increase the value of the modulus of elasticity of the PP material.

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### 6.2.4 Wall thicknesses

The first part of the first line shall be extended as follows:  
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— "The wall thickness, e, shall conform to Table 3a or 3b, as applicable, where "

The title of the present Table 3 shall be extended as follows:

— "Table 3a — Wall thickness/normal PP materials"

The note after Table 3a shall be extended as follows:

— "NOTE 1 For components conforming to this standard, the standard dimension ratio, SDR, and the values of the pipe series S specified in Table 3a are related as follows:"

After Table 3a and Note 1 add the following table and note:

**Table 3b — Wall thicknesses/ PP-HM materials**

Dimensions in millimetres

Nominal size DN/OD	Nominal outside diameter $d_n$	Wall thickness	
		SN 8 S 13,3	
		$e_{min}$	$e_{m,max}$
110	110	4,0	4,6
125	125	4,6	5,3
160	160	5,8	6,6
200	200	7,3	8,3
250	250	9,1	10,3
315	315	11,4	12,8
355	355	12,9	14,4
400	400	14,5	16,2
450	450	16,3	18,2
500	500	18,1	20,3
630	630	22,8	25,3
800	800	29,0	32,1
1000	1000	36,2	40,0
1200	1200	43,4	47,8
1400	1400	50,6	55,8
1600	1600	57,9	62,8

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NOTE 2 For components conforming to this standard, the standard dimension ratio, SDR, and the values of the pipe series S specified in Table 3b are related as follows:

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S 13,3 corresponds to SDR 27,6

#### 6.4.2 Wall thicknesses of sockets

The first sentence shall be extended as follows:

- "The wall thicknesses of sockets,  $e_2$  and  $e_3$  (see Figure 3), excluding the socket mouth, shall conform to Table 6a or 6b, as applicable, except that a reduction of 5 % of  $e_2$  and  $e_3$  resulting from core shifting is permitted."

The title of the present Table 6 shall be extended as follows:

- "Table 6a — Wall thicknesses of sockets for normal PP materials"

After Table 6a, add the following table:

**Table 6b — Wall thicknesses/of PP-HM materials**

Dimensions in millimetres

Nominal size DN/OD	Nominal outside diameter $d_n$	Wall thickness	
		SN 8 S 13,3	
		$e_{2,min}$	$e_{3,max}$
110	110	3,6	3,0
125	125	4,1	3,5
160	160	5,2	4,4
200	200	6,6	5,5
250	250	8,2	6,8
315	315	10,3	8,6
355	355	11,6	9,7
≥ 400	≥ 400	13,1	10,9

**7.1.1 General requirements**

In Table 7, the row for "Ring stiffness" shall be replaced with the following:

Ring stiffness, <u>normal PP materials</u>	S 20: ≥ 2 kN/m <sup>2</sup> S 16: ≥ 4 kN/m <sup>2</sup> S 11,2: ≥ 8 kN/m <sup>2</sup>	Test temperature Deflection Deflection speed for: 110 mm ≤ $d_n$ ≤ 200 mm 200 mm < $d_n$ ≤ 400 mm 400 mm < $d_n$ ≤ 1000 mm $d_n$ > 1000 mm	(23 ± 2) °C 3 % (5 ± 1) mm/min (10 ± 2) mm/min (20 ± 2) mm/min (50 ± 5) mm/min	EN ISO 9969
Ring stiffness, PP-HM materials	S 13,3: ≥ 8 kN/m <sup>2</sup>	Test temperature Deflection Deflection speed for: 110 mm ≤ $d_n$ ≤ 200 mm 200 mm < $d_n$ ≤ 400 mm 400 mm < $d_n$ ≤ 1000 mm $d_n$ > 1000 mm	(23 ± 2) °C 3 % (5 ± 1) mm/min (10 ± 2) mm/min (20 ± 2) mm/min (50 ± 5) mm/min	EN ISO 9969

**11.2 Minimum required marking of pipes**

In Table 13, the text shall be extended as follows:

– Material	PP <u>or</u> PP-HM, as applicable	a
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**11.3 Minimum required marking of fittings**

In Table 14, the text shall be extended as follows:

– Material	PP <u>or</u> PP-HM, as applicable	a
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**A.2 Material characteristics**

The following first indent shall be changed as follows:

— "Modulus of elasticity of normal PP materials: 1250 MPa ≤  $E_{(1min)}$  < 1700 MPa;"



Below the above changed line, add the following new line:

- "Modulus of elasticity of PP-HM materials:  $E_{(1min)} \geq 1700 \text{ MPa}$ ;"

### A.3 Ring stiffness

The first paragraph shall be replaced with the following:

- "The ring stiffness of pipes conforming to this standard is determined in accordance with EN ISO 9969 and is as given in Table A.1:

**Table A.1 — Relations between S-series and ring stiffnesses**

Normal PP $1250 \text{ MPa} \leq E_{(1min)} < 1700 \text{ MPa}$	PP-HM $E_{(1min)} \geq 1700 \text{ MPa}$	Ring stiffness
S 20	—	$\geq 2 \text{ kN/m}^2$
S 16	—	$\geq 4 \text{ kN/m}^2$
S 11,2	S 13,3	$\geq 8 \text{ kN/m}^2$

In the following paragraph, the following second sentence shall be deleted:

- "Consequently fittings are classified with the corresponding pipe stiffness."

  
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