



SLOVENSKI STANDARD SIST EN 13045:2009

01-november-2009

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SIST EN 13045:2001

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Packaging - Flexible cylindrical plastic tubes - Dimensions and tolerances

Packmittel - Zylindrische Kunststofftuben - Maße und Grenzabmaße

Emballage - Tubes souples cylindriques plastiques - Dimensions et tolérances
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ICS:

55.120

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Cans. Tins. Tubes

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EUROPEAN STANDARD

EN 13045

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2009

ICS 55.120

Supersedes EN 13045:2000

English Version

Packaging - Flexible cylindrical plastic tubes - Dimensions and tolerances

Emballage - Tubes souples cylindriques plastiques -
Dimensions et tolérances

Packmittel - Zylindrische Kunststofftuben - Maße und
Grenzabmaße

This European Standard was approved by CEN on 19 March 2009.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, 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 document (EN 13045:2009) has been prepared by Technical Committee CEN/TC 261 "Packaging", the secretariat of which is held by AFNOR.

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 October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.

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 13045:2000.

It is based on the professional recommendations of the European Tube Manufacturers Association (ETMA).

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

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EN 13045:2009 (E)**1 Scope**

This standard specifies the diameter, length, wall thickness and shoulder geometry of cylindrical plastic flexible tubes.

It is applicable to tubes used for packing pharmaceutical, cosmetic, hygiene, food and other domestic and industrial products.

2 Normative references

The following referenced documents are indispensable for the application 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.

EN 12374, *Packaging - Flexible tubes – Terminology*

3 Terms and definitions

For the purposes of this standard, the terms and definitions in EN 12374 and the following apply:

3.1**nominal diameter, D**

diameter d_1 of the tube measured at the shoulder

3.2**nominal length, L**

measured distance between the shoulder and the open end of the tube

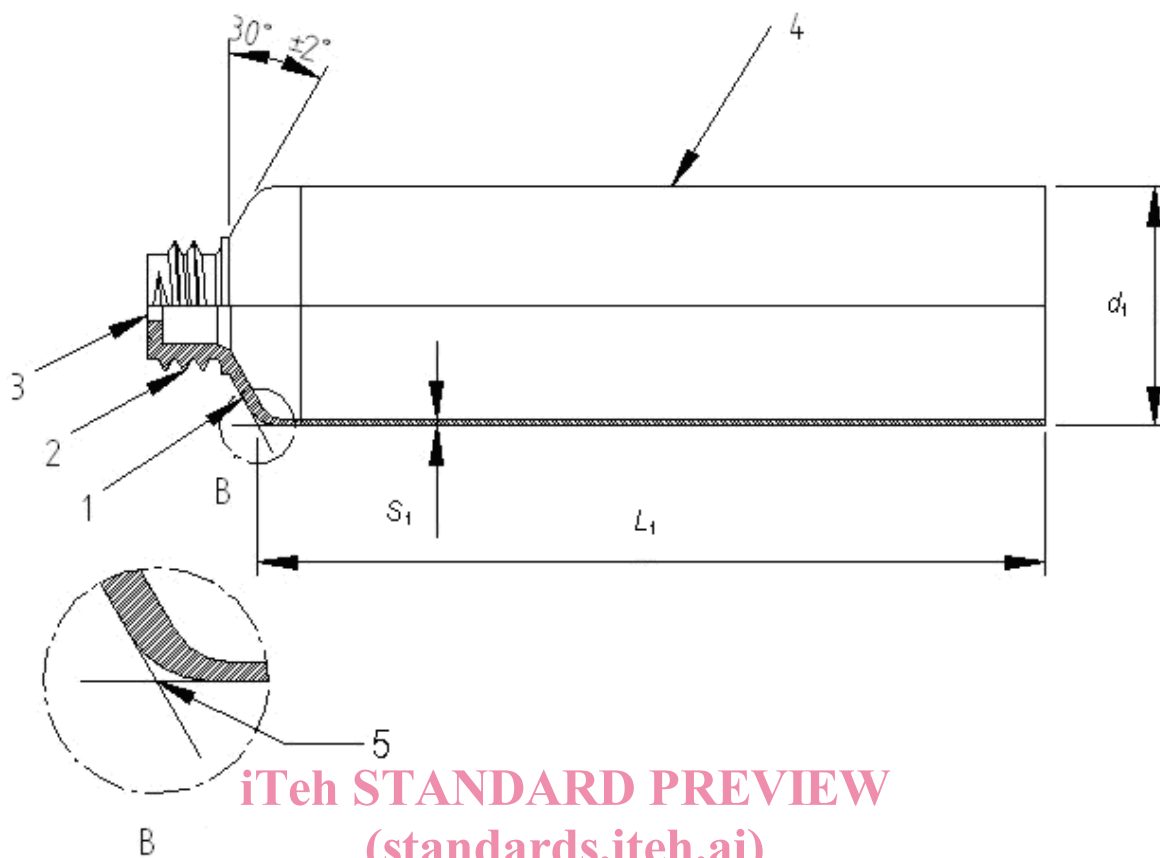
NOTE Length l_1 shown in Figure 1.

3.3**thickness of the sleeve, S_1**

thickness of the body wall of the tube

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Key

- 1 Shoulder
- 2 Nozzle
- 3 Orifice
- 4 Body (Tube sleeve)
- 5 Measurement point for the length of the tube body

Figure 1 — Cylindrical plastic tube**4 Dimensions**

All tube dimensions shall be in accordance with Table 1:

Table 1 — Dimensions (measurements in mm)

Nominal Diameter	d_1		$l_1(1)$	S_1	
	Diameter	Tolerance		Thickness	Tolerance
D			$\leq 100 \pm 1 \text{ mm}$ $> 100 \pm 1 \%$		
13,5	13,5	$\pm 0,4$	40 to 70	0,4	+0,02
16	16		55 to 80		-0,04
19	19		55 to 90		
22	22	+ 0,3	65 to 120	0,4 to 0,5	+ 0,02
25	25		70 to 135		
30	30	-0,4	70 to 150	0,5 to 0,6	-0,05
35	35		80 to 165		
40	40	+ 0,1	90 to 180	0,5 to 0,6	+ 0,02
45	45		110 to 175		
50	50	-0,5	120 to 200	0,5 to 0,6	-0,06
56	56		125 to 200		+0,0
60	60		165 to 240		-0,1
					+0,02
					-0,05

(1) The figures below represent the range of tube lengths that can be produced for each tube diameter.

These measures and tolerances are valid for standard materials like PE-HD, PE-MD, PE-LD and PE-LLD. Other materials may be subject to a mutual agreement between customer and supplier.