

Packaging — Flexible cylindrical plastic tubes — Dimensions and tolerances

ICS 55.120

National foreword

This British Standard is the UK implementation of EN 13045:2009. It supersedes BS EN 13045:2000 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PKW/0/-/10, Plastics.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Dimensions et tolérancesPackmittel - Zylindrische Kunststofftuben - Maße und
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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of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.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).

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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

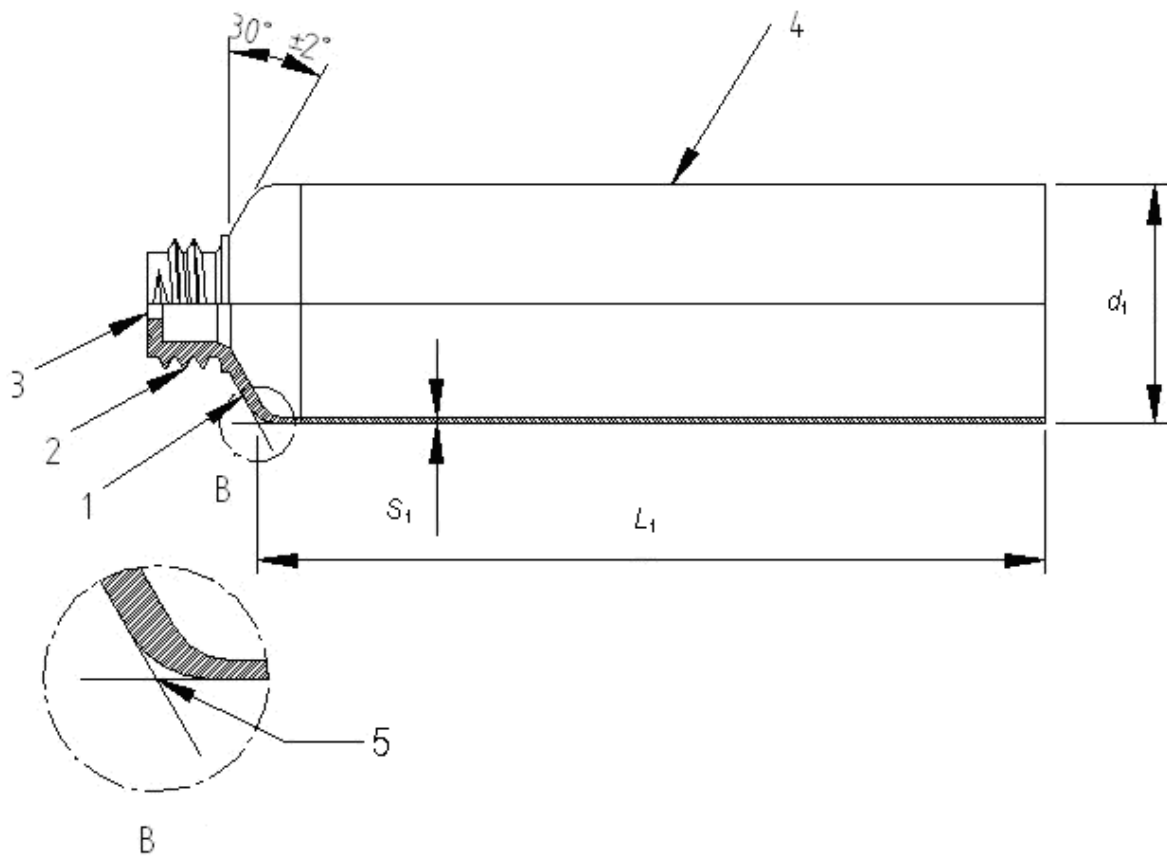
measured distance between the shoulder and the open end of the tube

NOTE Length l_1 shown in Figure 1.

3.3

thickness of the sleeve, S_1

thickness of the body wall of the tube



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

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