

Packaging — Cylindrical flexible laminated tubes — Dimensions and tolerances

ICS 55.120

National foreword

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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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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 April 2009

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ISBN 978 0 580 58513 5

Amendments/corrigenda issued since publication

Date	Comments

EUROPEAN STANDARD

EN 13461

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2009

ICS 55.120

Supersedes EN 13461:2001

English Version

**Packaging - Cylindrical flexible laminated tubes - Dimensions
and tolerances**Emballage - Tubes souples laminés cylindriques -
Dimensions et tolérancesPackmittel - Zylindrische Laminattuben - Maße und
Toleranzen

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Foreword

This document (EN 13461:2009) 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of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.

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This document supersedes EN 13461:2001.

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

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1 Scope

This document specifies sizes and geometric characteristics for cylindrical laminated flexible tubes which are produced by directly welding laminate materials. It applies to tubes used for packaging pharmaceutical, cosmetic and hygiene products, as well as for packaging food, industrial and domestic products.

2 Terms and definitions

For the purposes of this standard, the following terms and definitions apply (see Figure 1).

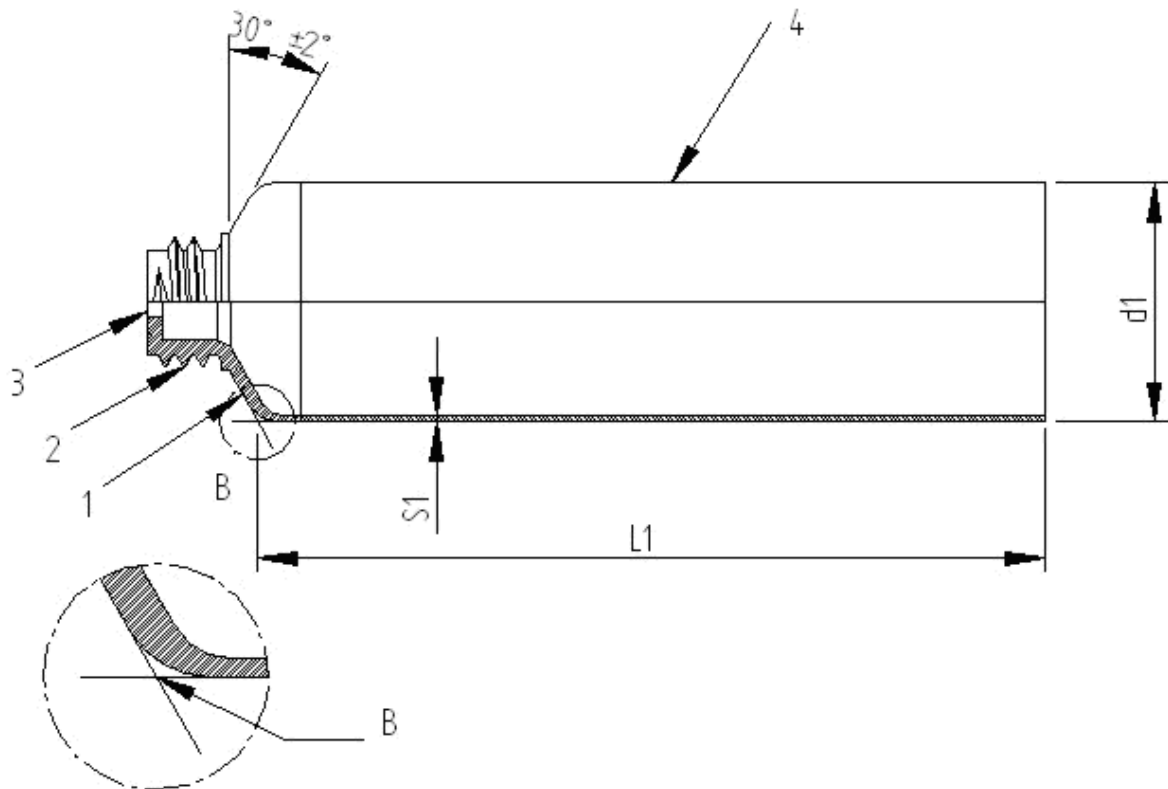
2.1
nominal diameter, D
conventional indication utilized for the commercial description of the tube, which corresponds approximately to the outside diameter d_1 of the body of the tube

2.2
nominal length, L
conventional indication utilized for the commercial description of the tube, corresponding approximately to the length l_1 : measured between the shoulder and the open end of the tube

NOTE The nominal length represents the length of the tube body (sleeve).

2.3
ovality diameter, d_2
diameter of the largest circle which can enclose the tube at any point along the body of the tube

2.4
wall thickness, S_1
thickness of the body wall of the tube



Key

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

Figure 1 — Dimensions

3 Dimensions

The dimensions of the tubes shall conform to Table 1.

Table 1 — Dimensions

Nominal diameter D mm	Actual outside diameter ¹ $d_1 (\pm 0,2)$ mm	Nominal length $L (+ 1,5/-2)^2$ mm	Maximum ovality diameter d_2 mm	Wall thickness $S_1 (\pm 10\%)$ μm
13,5	13,3 to 14	65 to 110	15,5	220 to 400 400
16	15,8 to 16,5	65 to 120	18	220 to 400
19	18,8 to 19,5	75 to 130	21	220 to 400
22	21,8 to 22,5	70 to 150	24,5	220 to 400
25	24,8 to 25,5	90 to 160	27,5	220 to 400
28	27,8 to 28,5	100 to 185	31	220 to 400
30	29,6 to 30,5	120 to 195	33	220 to 400
32	31,8 to 32,5	120 to 200	35,5	220 to 400
35	34,6 to 35,5	90 to 200	38,5	220 to 400
38	38	204	42	220 to 400
40	39,6 to 40,5	120 to 200	44	220 to 400
50	49,6 to 50,5	120 to 200	55	220 to 400

1 Depending on the production machinery, the nominal diameter can vary within the limits of the given actual outside diameter. The actual outside diameter has a tolerance of $\pm 0,2$ mm.

2 The actual length l_1 should be within $+ 1,5$ mm/ -2 mm of the nominal length.

Bibliography

- [1] EN 12374, *Packaging – Flexible tubes - Terminology*

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