

ICS 55.120

English Version

## Packaging - Flexible laminate tubes - Test methods to determine the strength of the head welding

Emballage - Tubes souples laminés - Méthodes d'essai pour déterminer la résistance de la soudure de la tête

Packmittel - Laminattuben - Prüfverfahren zur Bestimmung der Festigkeit der Kopfnaht

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## Foreword

This document (EN 15385:2007) has been prepared by Technical Committee CEN/TC 261 "Packaging", the secretariat of which is held by AFNOR.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2008 and conflicting national standards shall be withdrawn at the latest by February 2008.

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 United Kingdom.

## 1 Scope

This European Standard specifies a method for the determination of the strength of the head welding of flexible laminate tubes.

It is applicable to flexible laminate tubes used for packing pharmaceutical, cosmetic, hygiene, food and other household products.

## 2 Normative references

Not applicable.

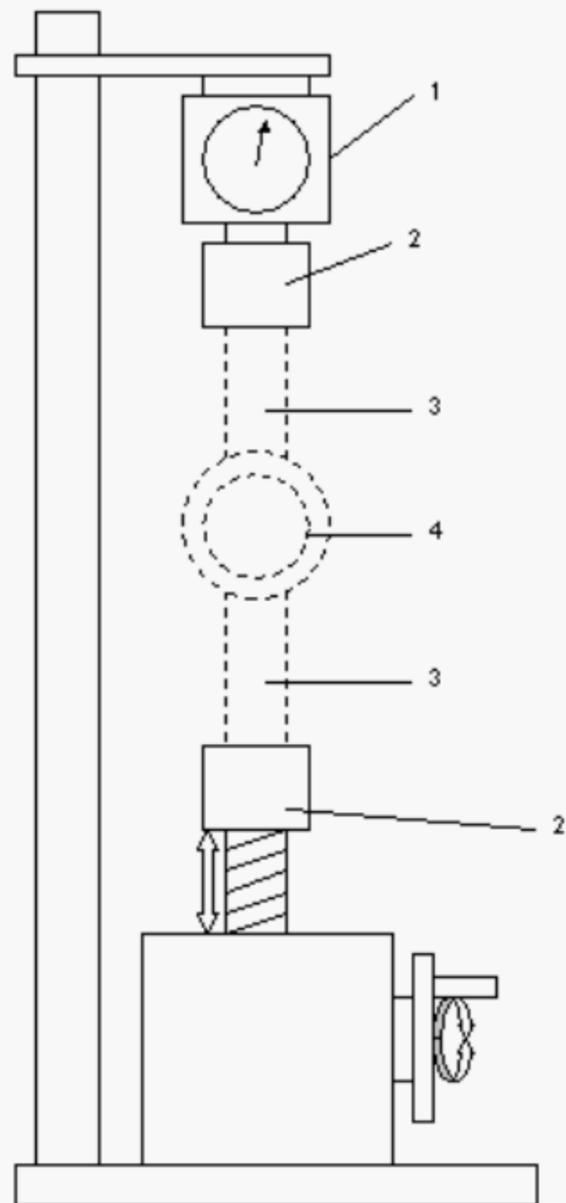
## 3 Principle

The test for the strength of the head welding is used to show whether the body laminate deforms before becoming detached from the shoulder.

## 4 Test equipment

4.1 Cutting device

4.2 Tensile/compression tester

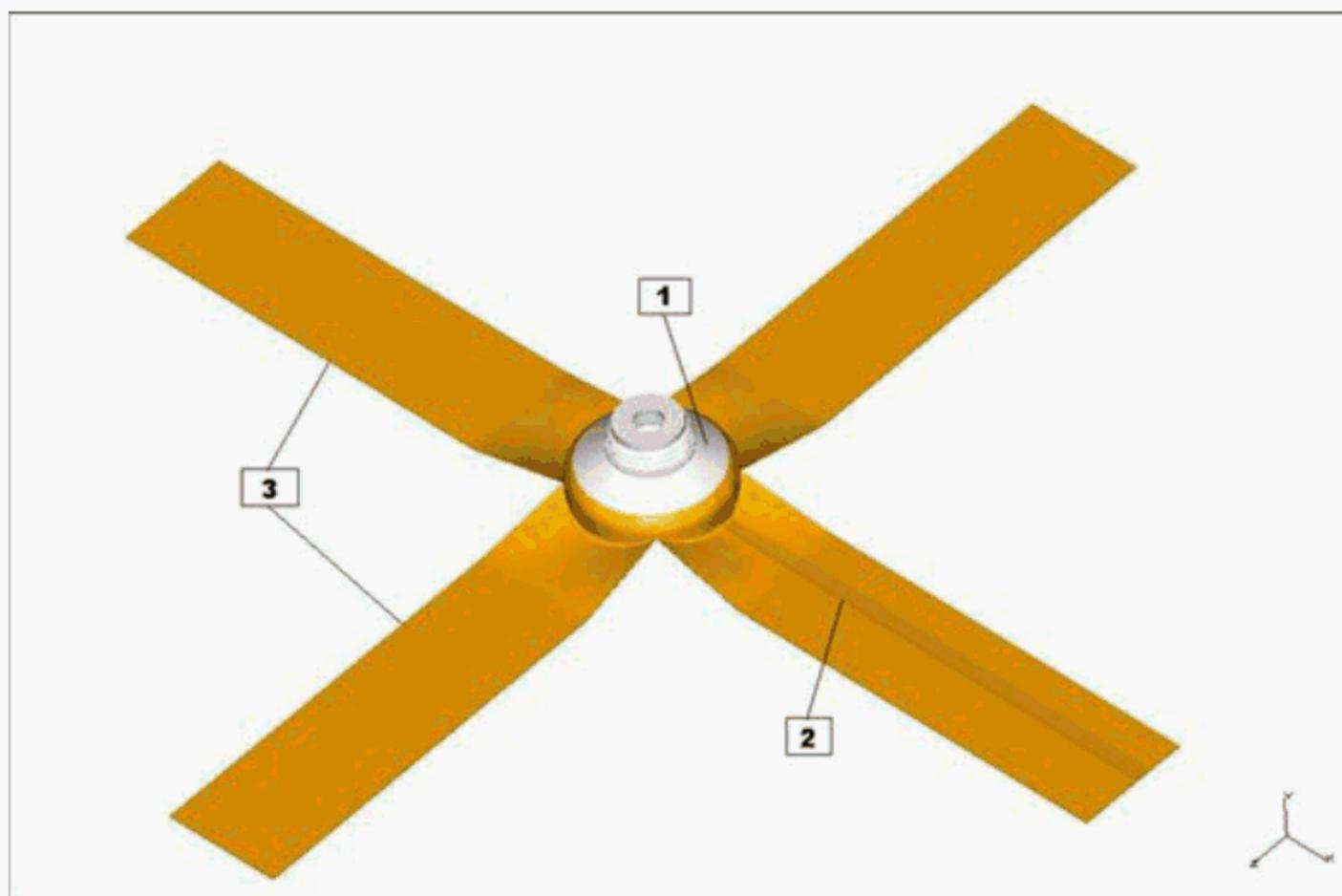
**Key**

- 1 force meter
- 2 clamp
- 3 strip
- 4 tube shoulder

**Figure 1 — Tensile strength tester**

## 5 Test procedure

- a) Cut four strips of equal width (each one quarter of the circumference) from the tube body at the positions shown on Figure 2, ensuring one strip has the side seam in the centre. The cut should cover the entire length of the laminate web including the part over the shoulder.
- b) Pull opposing pair of strips at a speed of 130 mm/min and attempt to remove material from shoulder.
- c) Ensure that the material has a good weld to the shoulder. The body laminate should stretch/deform not become detached below 3 N/mm of strip width.
- d) Repeat for second pair of cut strips.



**Key**

- 1 tube shoulder
- 2 side seam
- 3 strips

**Figure 2 — Test configuration of the tube**

## 6 Test report

If not otherwise agreed between supplier and customer the test report shall contain the following information:

- a) reference to this European Standard, i.e. EN 15385 and, if necessary, a specification for the method of sampling and acceptance of the batch;
- b) the complete identification of the batch and of the tubes checked;
- c) the number of tubes checked;
- d) the number of defects;
- e) the test result;
- f) all factors which could have affected the results or all operating details not specified in this European Standard;
- g) date, place of test and name of tester.

## Bibliography

- [1] EN 12374, *Packaging — Flexible tubes — Terminology*
- [2] EN 13461, *Packaging — Cylindrical flexible laminated tubes — Dimensions and tolerances*