

STN	Obaly Flexibilné hliníkové tuby Metóda merania hrúbky vnútornej vrstvy laku	STN EN 13048 77 3026
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Packaging - Flexible aluminium tubes - Internal lacquer film thickness measurement method

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/23

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English Version

**Packaging - Flexible aluminium tubes - Internal lacquer
film thickness measurement method**Emballage - Tubes souples en aluminium - Méthode de
détermination de l'épaisseur de vernis intérieurPackmittel - Aluminiumtuben - Verfahren zur
Bestimmung der Dicke des Innenschutzlackes

This European Standard was approved by CEN on 22 August 2022.

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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-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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EN 13048:2022 (E)

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European foreword

This document (EN 13048:2022) 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of an identical text or by endorsement, at the latest by April 2023, and conflicting national standards shall be withdrawn at the latest by April 2023.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13048:2009.

In comparison with the previous edition, the following modifications have been made:

- Clause 4 on eddy current test has been added;
- Clause 5 and Clause 6 have been redrafted with editorial modification.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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

EN 13048:2022 (E)**1 Scope**

This document specifies methods for the determination of the thickness of the lacquer film applied inside cylindrical and conical aluminium tubes. The methods are a reference. They can also be used as a reference when calibrating other electronic instruments suitable for determining coating weight thickness. It is applicable to aluminium tubes used for packing pharmaceutical, cosmetic, hygiene, food and other domestic products.

NOTE Although not specified in this document there are available suitable automatic film thickness measurement instruments that provide instantaneous results with good accuracy ($<1\mu\text{m}$).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 12374:2022, *Packaging — Flexible tubes — Terminology*

EN ISO 2360:2017, *Non-conductive coatings on non-magnetic electrically conductive base metals — Measurement of coating thickness — Amplitude-sensitive eddy-current method (ISO 2360:2017)*

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