# STN

# Náterové látky Stanovenie hustoty Časť 3: Oscilačná metóda (ISO 2811-3: 2023)

STN EN ISO 2811-3

67 3012

Paints and varnishes - Determination of density - Part 3: Oscillation method (ISO 2811-3:2023)

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. 01/24

Obsahuje: EN ISO 2811-3:2023, ISO 2811-3:2023

Oznámením tejto normy sa ruší STN EN ISO 2811-3 (67 3012) z novembra 2011

#### 137966

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

## **EN ISO 2811-3**

November 2023

ICS 87.040

Supersedes EN ISO 2811-3:2011

### **English Version**

# Paints and varnishes - Determination of density - Part 3: Oscillation method (ISO 2811-3:2023)

Peintures et vernis - Détermination de la masse volumique - Partie 3: Méthode par oscillation (ISO 2811-3:2023) Beschichtungsstoffe - Bestimmung der Dichte - Teil 3: Schwingungsverfahren (ISO 2811-3:2023)

This European Standard was approved by CEN on 2 July 2023.

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

CEN members are the national standards bodies of 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 United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

## EN ISO 2811-3:2023 (E)

Contents	Page
European foreword	3

### **European foreword**

This document (EN ISO 2811-3:2023) has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" in collaboration with Technical Committee CEN/TC 139 "Paints and varnishes" the secretariat of which is held by DIN.

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 May 2024, and conflicting national standards shall be withdrawn at the latest by May 2024.

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 ISO 2811-3:2011.

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

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, 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.

### **Endorsement notice**

The text of ISO 2811-3:2023 has been approved by CEN as EN ISO 2811-3:2023 without any modification.

# INTERNATIONAL STANDARD

ISO 2811-3

Third edition 2023-10

# Paints and varnishes — Determination of density —

Part 3: **Oscillation method** 

Peintures et vernis — Détermination de la masse volumique — Partie 3: Méthode par oscillation



ISO 2811-3:2023(E)



### **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

# ISO 2811-3:2023(E)

Con	itents	Page
Forev	word	iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Principle	1
5	Temperature	1
6	Apparatus	2
7	Sampling	2
8	Procedure 8.1 General 8.2 Determination	2
9	Calculation	3
10	Precision  10.1 General  10.2 Repeatability limit, r  10.3 Reproducibility limit, R	3 3
11	Test report	3
Anne	x A (informative) Calibration of the apparatus — Determination of the apparatus constants	5
Anne	x B (informative) Density values for damp air and air-free water	6
	x C (informative) Calculation of density at the reference temperature from measurements at other temperatures	
Biblio	ography	9

### ISO 2811-3:2023(E)

### Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see <a href="www.iso.org/directives">www.iso.org/directives</a>).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <a href="www.iso.org/patents">www.iso.org/patents</a>. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

This document was prepared by Technical Committee ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 139, *Paints and varnishes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 2811-3:2011), which has been technically revised.

The main changes are as follows:

- a requirement has been added to <u>8.2</u>, to de-aerate the sample prior to the determination in order to achieve reproducible results for the density;
- Table B.3 has been deleted;
- a bibliography has been added.

A list of all parts in the ISO 2811 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at <a href="https://www.iso.org/members.html">www.iso.org/members.html</a>.

# Paints and varnishes — Determination of density —

### Part 3:

# Oscillation method

### 1 Scope

This document specifies a method for determining the density of paints, varnishes and related products using an oscillator.

The method is suitable for all materials, including paste-like coatings. If a pressure-resistant type of apparatus is used, the method is also applicable to aerosols.

#### 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.

ISO 1513, Paints and varnishes — Examination and preparation of test samples

ISO 15528, Paints, varnishes and raw materials for paints and varnishes — Sampling

koniec náhľadu – text ďalej pokračuje v platenej verzii STN