

**Paints and varnishes - Determination of density - Part 3:  
Oscillation method (ISO 2811-3:2011)**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 2811-3:2011 sisaldab Euroopa standardi EN ISO 2811-3:2011 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.03.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

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Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 2811-3:2011 consists of the English text of the European standard EN ISO 2811-3:2011.

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density (mass/volumen), density measurement, determination, paints, tests, varnishes

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English Version

Paints and varnishes - Determination of density - Part 3:  
Oscillation method (ISO 2811-3:2011)

Peintures et vernis - Détermination de la masse volumique  
- Partie 3: Méthode par oscillation (ISO 2811-3:2011)

Beschichtungsstoffe - Bestimmung der Dichte - Teil 3:  
Schwingungsverfahren (ISO 2811-3:2011)

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COMITÉ EUROPÉEN DE NORMALISATION  
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## Foreword

This document (EN ISO 2811-3:2011) 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of an identical text or by endorsement, at the latest by September 2011, and conflicting national standards shall be withdrawn at the latest by September 2011.

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.

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### Endorsement notice

The text of ISO 2811-3:2011 has been approved by CEN as a EN ISO 2811-3:2011 without any modification.

## Contents

Page

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

# Paints and varnishes — Determination of density —

## Part 3: Oscillation method

### 1 Scope

This part of ISO 2811 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 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.

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

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

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

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1 density

$\rho$

mass divided by the volume of a portion of a material

NOTE This is expressed in grams per cubic centimetre.

### 4 Principle

A glass or stainless-steel U-tube is filled with the product under test. The tube is clamped at both ends and then subjected to oscillation. The resonance frequency of the filled tube varies with the mass contained in the tube, i.e. the density of the product under test.