

Coating powders - Part 3: Determination of density by liquid displacement pycnometer (ISO 8130-3:2021)

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ICS 87.040

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EUROPEAN STANDARD

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English Version

Coating powders - Part 3: Determination of density by liquid displacement pycnometer (ISO 8130-3:2021)

Poudres pour revêtement - Partie 3: Détermination de la masse volumique à l'aide d'un pycnomètre à déplacement de liquide (ISO 8130-3:2021)

Pulverlacke - Teil 3: Bestimmung der Dichte mit einem Pycnometer durch Flüssigkeitsverdrängung (ISO 8130-3:2021)

This European Standard was corrected and reissued by the CEN-CENELEC Management Centre on 18 August 2021.

This European Standard was approved by CEN on 28 April 2021.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN ISO 8130-3:2021) 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of an identical text or by endorsement, at the latest by January 2022, and conflicting national standards shall be withdrawn at the latest by January 2022.

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 8130-3:2010.

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 websites.

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Endorsement notice

The text of ISO 8130-3:2021 has been approved by CEN as EN ISO 8130-3:2021 without any modification.

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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 documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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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 www.iso.org/iso/foreword.html.

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 second edition cancels and replaces the first edition (ISO 8130-3:1992), which has been technically revised. The main changes compared to the previous edition are as follows:

- the scope has been revised editorially;
- the terms and definitions clause ([Clause 3](#)) has been added;
- the reference for the pycnometer has been changed from ISO 787-10 to ISO 2811-1;
- the use of acetone for cleaning the pycnometer has been deleted;
- the order of filling the pycnometer has been changed;
- the acceptable difference between two results ([Clause 9](#)) is given as a percentage;
- the text has been editorially revised and the normative references have been updated.

A list of all parts in the ISO 8130 series can be found on the ISO website.

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Coating powders —

Part 3:

Determination of density by liquid displacement pycnometer

1 Scope

This document specifies a liquid displacement pycnometer method for the determination of the density of coating powders. The method is based on a determination of the mass and the volume of a test portion.

Coating powders with density $<1 \text{ g/cm}^3$, can be measured in accordance with ISO 1183-1 and the appropriate method, by agreement.

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 2811-1, *Paints and varnishes — Determination of density — Part 1: Pycnometer method*

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

ISO 8130-14, *Coating powders — Part 14: Vocabulary*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8130-14 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Principle

The density of the coating powder is determined in a liquid displacement pycnometer, using a liquid that completely wets the product under test without swelling or dissolving it.

5 Materials

5.1 Water, of at least grade 3 purity as defined in ISO 3696, freshly boiled and cooled.