

Coating powders - Part 3: Determination of density by liquid displacement pycnometer

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 8130-3:2010 sisaldab Euroopa standardi EN ISO 8130-3:2010 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.12.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 10.11.2010.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN ISO 8130-3:2010 consists of the English text of the European standard EN ISO 8130-3:2010.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.12.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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ICS 87.040

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English Version

Coating powders - Part 3: Determination of density by liquid displacement pycnometer (ISO 8130-3:1992)

Poudres pour revêtement - Partie 3: Détermination de la masse volumique à l'aide d'un pycnomètre à déplacement de liquide (ISO 8130-3:1992)

Pulverlacke - Teil 3: Bestimmung der Dichte mit einem Pycnometer durch Flüssigkeitsverdrängung (ISO 8130-3:1992)

This European Standard was approved by CEN on 16 October 2010.

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Foreword

The text of ISO 8130-3:1992 has been prepared by Technical Committee ISO/TC 35 "Paints and varnishes" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 8130-3:2010 by 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of an identical text or by endorsement, at the latest by May 2011, and conflicting national standards shall be withdrawn at the latest by May 2011.

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Endorsement notice

The text of ISO 8130-3:1992 has been approved by CEN as a EN ISO 8130-3:2010 without any modification.

Coating powders —

Part 3:

Determination of density by liquid displacement pyknometer

1 Scope

This part of ISO 8130 specifies a liquid displacement pyknometer 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.

The apparatus specified is relatively inexpensive, but the liquid displacement pyknometer method is liable to give erroneous results, particularly if the powder swells in contact with the displacement liquid used or the displacement liquid does not totally displace the air between the powder particles. The liquid displacement method is much slower in execution and less accurate than the gas comparison pyknometer method specified in ISO 8130-2 and is only to be used if it can be shown that the same results will be obtained as for the gas comparison pyknometer method.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 8130. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 8130 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 787-10:1981, *General methods of test for pigments and extenders — Part 10: Determination of density — Pyknometer method.*

ISO 842:1984, *Raw materials for paints and varnishes — Sampling.*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods.*

ISO 8130-2:1992, *Coating powders — Part 2: Determination of density by gas comparison pyknometer (referee method).*

3 Principle

The density of the coating powder is determined in a liquid displacement pyknometer in accordance with ISO 787-10, using a liquid that completely wets the product under test without swelling or dissolving it.

4 Materials

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

4.2 Displacement liquid: any suitable aliphatic hydrocarbon or mixture of aliphatic hydrocarbons, free from aromatic compounds, with a boiling point within the range 80 °C to 140 °C.

n-Heptane has been found to be suitable in many instances for the determination of the density of thermosetting coating powders. However, if there is an interaction between *n*-heptane and the product under test or its components, a suitable alternative liquid shall be used.

4.3 Acetone, analytical grade.