

Hermeetilised metallkeraamilised materjalid ja kõvasulamid. Tiheduse määramine

Impermeable sintered metal materials and hardmetals -
Determination of density

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 3369:2010 sisaldab Euroopa standardi EN ISO 3369:2010 ingliskeelset teksti.

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English Version

**Impermeable sintered metal materials and hardmetals -
Determination of density (ISO 3369:2006)**

Matériaux en métal fritté imperméable et métaux-durs -
Détermination de la masse volumique (ISO 3369:2006)

Undurchlässige Sintermetallwerkstoffe und Hartmetalle -
Ermittlung der Dichte (ISO 3369:2006)

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

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Foreword

The text of ISO 3369:2006 has been prepared by Technical Committee ISO/TC 119 “Powder metallurgy” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 3369:2010.

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of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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Endorsement notice

The text of ISO 3369:2006 has been approved by CEN as a EN ISO 3369:2010 without any modification.

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Impermeable sintered metal materials and hardmetals — Determination of density

1 Scope

This International Standard specifies a method of determining the density of impermeable sintered metal materials and hardmetals.

NOTE For the determination of density of permeable sintered metal materials, see ISO 2738:1999, *Sintered metal materials, excluding hardmetals — Permeable sintered metal materials — Determination of density, oil content and open porosity*.

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 4489, *Sintered hardmetals — Sampling and testing*

3 Principle

Weighing of a test piece, first in air and then in a liquid, and determination of the density by calculation.

4 Apparatus and materials

4.1 Precision balance, having a capacity which will permit readings within $\pm 0,1$ mg, on weighings up to 10 g and $\pm 0,001$ % above 10 g.

The weights shall be calibrated and have a density of not less than 7 g/cm³.

4.2 Arrangement of racks or a **suspension wire**, according to Figures 1 and 2. In each case, the suspension wire shall have a maximum diameter of 0,25 mm. A heavier gauge wire shall only be used if this is necessary to support the test piece.

4.3 Vessel, for the weighing liquid. For test pieces of volume less than 10 cm³ the vessel shall be dimensioned so that, when the test piece is lowered into the liquid, the rise in liquid level is less than 2,5 mm.

4.4 Distilled or deionized and preferably degassed water, to which 1 or 2 drops of a wetting agent have been added.

The following values shall be used for the density in air, ρ_w , of distilled water (see Table 1).