INTERNATIONAL STANDARD 1068

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Plastics — PVC resins — Determination of compacted apparent bulk density

Matières plastiques — Résines de polychlorure de vinyle — Détermination de la masse volumique apparente du produit tassé

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 61 has reviewed ISO Recommendation R 1068 and found it technically suitable for transformation. International Standard ISO 1068 therefore replaces ISO Recommendation R 1068-1969 to which it is technically identical.

ISO Recommendation R 1068 was approved by the Member Bodies of the following countries :

Australia	Hungary	Romania
Austria	India	South Africa, Rep. of
Belgium	Iran	Spain
Bulgaria	Israel	Sweden
Canada	Italy	Switzerland
Czechoslovakia	Japan	Turkey
Egypt, Arab Rep. of	Korea, Rep. of	United Kingdom
France	Netherlands	U.S.A.
Germany	New Zealand	Yugoslavia
Greece	Poland	

No Member Body expressed disapproval of the Recommendation.

The Member Body of the following country disapproved the transformation of ISO/R 1068 into an International Standard :

Canada

Printed in Switzerland

INTERNATIONAL STANDARD ISO 1068-1975 (E)/ERRATUM

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Plastics — PVC resins — Determination of compacted apparent bulk density

ERRATUM

Outside front cover :

a) Replace the English title by :

"**Plastics — Homopolymer and copolymer resins of vinyl chloride — Determination of compacted apparent bulk density**".

b) Replace the French sub-title by :

"*Plastiques — Résines d'homopolymères et de copolymères de chlorure de vinyle — Détermination de la masse volumique apparente du produit tassé*".

Page 1

a) Replace the title by :

"**Plastics — Homopolymer and copolymer resins of vinyl chloride — Determination of compacted apparent bulk density**".

b) Replace the third line of clause 1 by :

"homopolymer and copolymer resins of vinyl chloride."

c) Replace the note to clause 1 by :

"NOTE — The non-compacted apparent bulk density may be determined by the method specified in ISO 60, *Plastics — Determination of apparent density of material that can be poured from a specified funnel.*"

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Plastics — PVC resins — Determination of compacted apparent bulk density

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method for the determination of the compacted apparent bulk density of PVC resins.

NOTE — The non-compacted apparent bulk density may be determined according to ISO/R 60, *Determination of apparent density of moulding material that can be poured from a specified funnel.*

2 PRINCIPLE

Placing a known quantity of PVC resin in a precision graduated cylinder and submitting to shaking under given conditions.

Calculation of the compacted apparent bulk density from the mass of the resin and its volume after compaction.

3 APPARATUS

3.1 Shaking machine, giving 100 to 250 falls per minute from a height of 3 ± 0,2 mm, as shown in the figure. The cylinder holder shall have a mass of 450 ± 20 g.

3.2 Precision graduated glass measuring cylinder, 250 ml capacity, graduated in 2 ml and with a non-graduated portion of at least 50 ml volume. Its internal diameter shall be about 38 mm and its mass 220 ± 40 g (see the figure).

3.3 Metallic piston, of diameter slightly smaller than the internal diameter of the cylinder.

3.4 Laboratory balance, enabling the cylinder to be weighed to the nearest 0,1 g.

4 PROCEDURE

Wash and dry the cylinder and weigh it to the nearest 0,1 g. Introduce about 100 g of PVC resin, without shaking, and weigh the cylinder and resin to the nearest 0,1 g. Calculate by difference the mass *m* of PVC resin used.

Place the cylinder in the holder of the shaking machine and start the machine. After 1 250 ± 50 cycles stop the machine and, if necessary, level the free surface of the resin with the metal piston by turning it without compacting the powder. Read off the volume occupied by the powder to the nearest 1 ml.

Repeat the shaking for a further 1 250 ± 50 cycles and determine the new volume.

If the difference between the two readings is less than or equal to 2 ml, take the lower value, *V* ml, and stop the test.

If the difference is greater than 2 ml, continue shaking for further periods of 1 250 ± 50 cycles until the volumes measured after two successive shaking periods do not differ by more than 2 ml. Take the lower value, *V* ml, and stop the test.

5 EXPRESSION OF RESULTS

The compacted apparent bulk density, in grams per millilitre, is calculated from the formula

$$\frac{m}{V}$$

where

m is the mass, in grams, of the sample of PVC resin;

V is the volume, in millilitres, of the compacted PVC resin.

6 TEST REPORT

The test report shall include the following particulars :

a) the reference to this International Standard;

b) the density in grams per millilitre;

c) the date of the test.

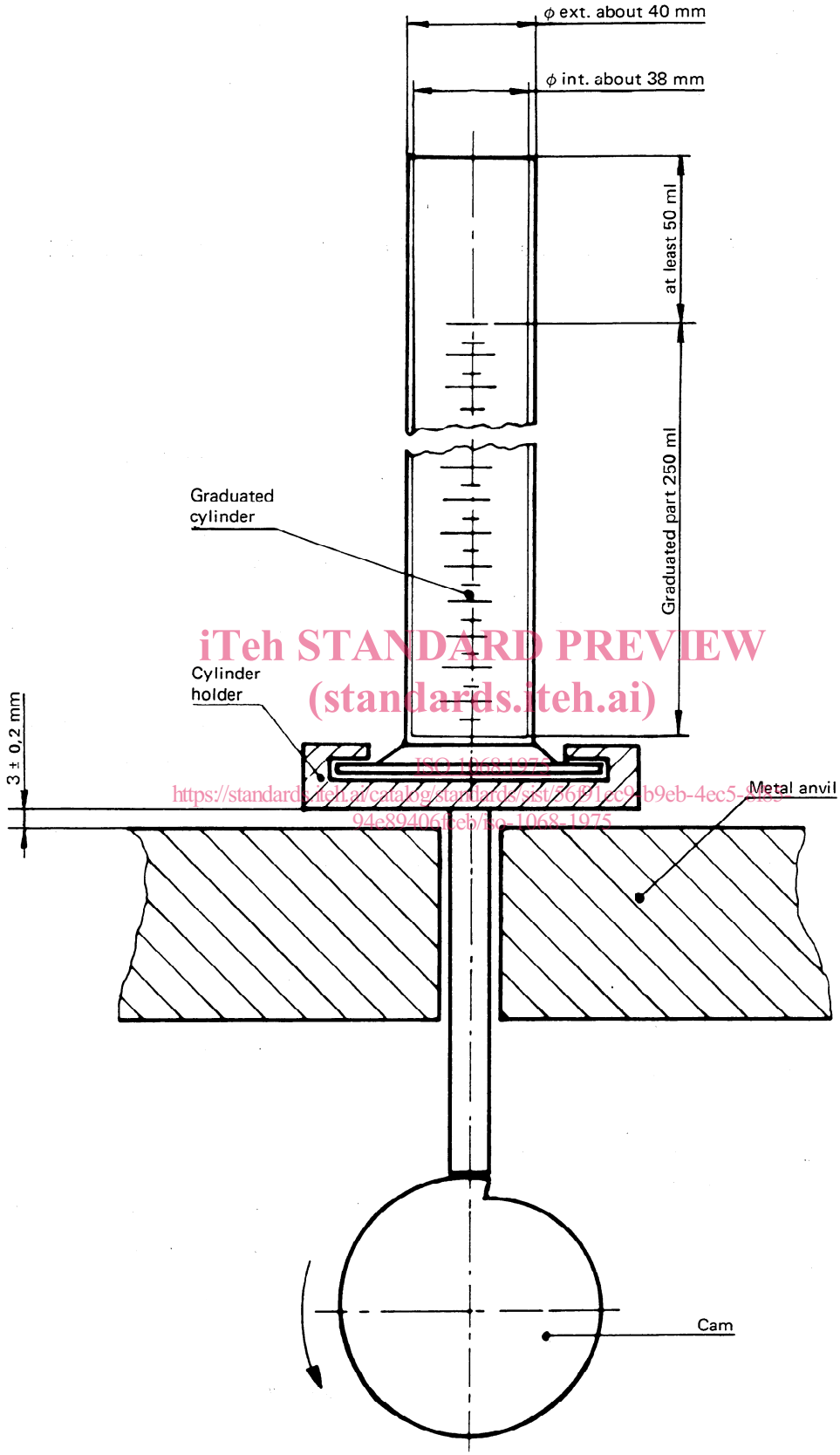

FIGURE — **Test apparatus**