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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 61

PLASTICS

DETERMINATION OF APPARENT DENSITY
OF MOULDING MATERIAL
THAT CANNOT BE POURED FROM A SPECIFIED FUNNEL

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 61, *Determination of Apparent Density of Moulding Material that cannot be Poured from a Specified Funnel*, was prepared by Technical Committee ISO/TC 61, *Plastics*, the Secretariat of which is held by the American Standards Association, Incorporated (ASA).

At its second meeting, held in Turin, in October 1952, the Technical Committee assigned the development of this question to its Working Group No. 5, *Physical Chemical Properties*, under the leadership of the United Kingdom.

The draft formulated by the Working Group, was presented to the Technical Committee at its third plenary meeting, held at Stockholm, in August 1953, and then distributed to the members of the Technical Committee as a draft proposal for an ISO Recommendation.

After its reconsideration at the fourth meeting of ISO/TC 61, held in Brighton, in October 1954, the draft proposal was adopted, subject to some amendments, as a Draft ISO Recommendation.

On 31 December 1955, the Draft ISO Recommendation was circulated to all the ISO Member Bodies and, some amendments having been taken into consideration, it was approved by the following 29 Member Bodies (out of a total of 37):

Australia	India	Portugal
Austria	Ireland	Spain
Bulgaria	Israel	Sweden
Chile	Italy	Turkey
Czechoslovakia	Japan	Union of South Africa
*Denmark	Mexico	United Kingdom
Finland	Netherlands	U.S.A.
France	New Zealand	U.S.S.R.
Germany	Pakistan	Yugoslavia
*Greece	Poland	

No Member Body opposed approval of the Draft.

The Draft ISO Recommendation was then submitted, by correspondence, to the ISO Council, which decided, in April 1958, to accept it as an ISO RECOMMENDATION.

* These Member Bodies stated that they had no objection to the Draft being approved.

PLASTICS

DETERMINATION OF APPARENT DENSITY OF MOULDING MATERIAL THAT CANNOT BE Poured FROM A SPECIFIED FUNNEL

1. SCOPE

- 1.1 This method of test describes the procedure for determining the apparent density, i.e. the weight per unit of volume, of loose moulding material that cannot be poured from a funnel of specified design.*
- 1.2 A knowledge of apparent density is of limited value in estimating the relative fluffiness or bulk of moulding materials, unless their specific gravities in the moulded condition are approximately the same.

2. APPARATUS

- 2.1 The apparatus consists of the following:
- (a) balance to weigh to 0.1 g;
 - (b) measuring cylinder, smoothly finished inside, which may be constructed of metal, of a capacity of $1000 \text{ ml} \pm 20 \text{ ml}$ and an internal diameter of $90 \text{ mm} \pm 2 \text{ mm}$;
 - (c) plunger consisting of a hollow cylinder of a weight of $2\,300 \text{ g} \pm 20 \text{ g}$, closed at one end and having an external diameter slightly smaller than the internal diameter of the measuring cylinder. The plunger may conveniently be weighted with lead shot.

3. PROCEDURE

- 3.1 A quantity of $60 \text{ g} \pm 0.2 \text{ g}$ of loose moulding material is dropped, little by little, into the measuring cylinder so that it is distributed evenly with its surface as level as possible. The plunger is then lowered slowly into the measuring cylinder until it is entirely supported by the material. After an interval of one minute the height of the material with the plunger resting upon it is measured to the nearest 1 mm. A convenient method of measuring the height of the material is given, e.g., by means of a suitable scale marked vertically on the outside surface of the plunger.
- 3.2 Three determinations are made on the sample of moulding material under test.

* See ISO Recommendation R 60, *Plastics - Determination of Apparent Density of Material that can be Poured from a Specified Funnel*.