ISO 60 â€” Plastics â€” Determination of Apparent Density of Material that can be Poured from a Specified Funnel â€“ Testing Equipment

Description

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a method of determining the apparent density, i.e. the mass per unit of volume, of base material (powder or granular material) that can be poured from a funnel of specified design.

NOTE: For a method of degerming the apparent density of loose moulding maternal that cannot be poured from a specified

funnel, me ISO 61.

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When the method is applied to relatively coarse materials, rather variable results may be obtained, owing to the error introduced when a straightedge blade is drawn across the top of the cylinder.

A knowledge of apparent density is of limited value in estimating the relative fluffiness or bulk of moulding materials, unless their densities in the moulded condition are approximately the same.

2 APPARATUS

2.1 Balance, accurate to 0,1 g.

2.2 Measuring cylinder, smoothly finished inside, which may be constructed of metal, of capacity 100 Â± 0,5 ml, and internal diameter 45 Â± 5 mm.

2.3 Funnel, of the form and dimensions shown in the figure, with a cover for the lower orifice (for example metal plate).

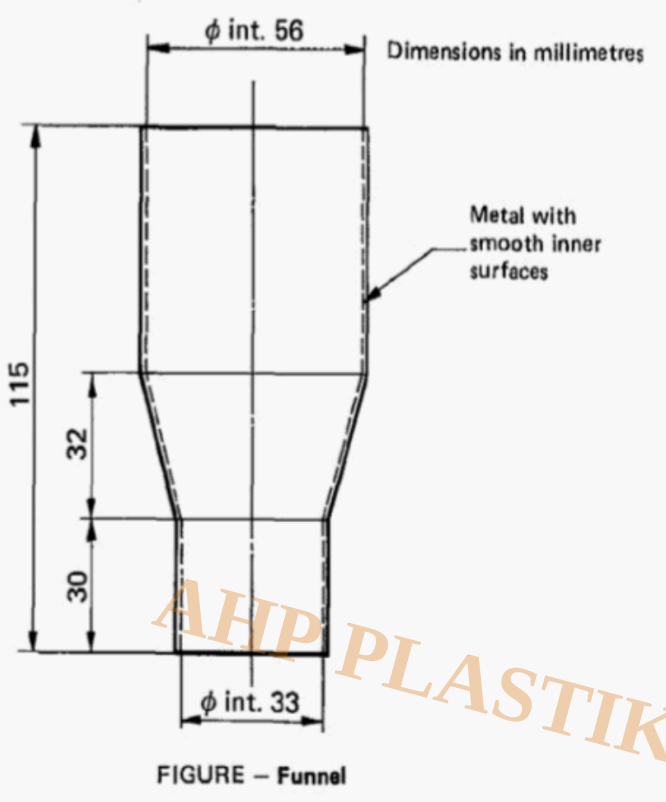


FIGURE – **Funnel**

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3 PROCEDURE

3.1 Support the funnel (2.3) vertically with its lower orifice 20 to 30 mm above the measuring cylinder (2.2) and coaxial with it. Well mix the sample of the powder or granular material before test. With the lower orifice of the funnel closed by means of the cover, place a quantity of 110 to 120 ml of the powder or granular material in the funnel.

3.2 Remove the cover quickly and allow the material to flow into the measuring cylinder. If necessary, thermosetting moulding material may be assisted to flow by loosening the material with a rod. If the material will not flow owing to electrostatic charges, another test should be carried out with the addition of a small amount of gamma alumina1) or carbon black (a few per cent) or ethanol (a few milliliters).

When the measuring cylinder is full, draw a straightedge blade across the top of the vessel to remove excess material. Weigh the contents of the measuring cylinder to the nearest 0,1 g, using the balance (2.1).

3.3 Make two determinations on the sample of moulding material under test.

4 EXPRESSION OF RESULTS

The apparent density of the material under test is given in grams per milliliter, by the formula

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

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where:
m is the mass, in grams, of the contents of the measuring cylinder,

V is the volume, in milliliters, of the measuring cylinder (Le. 100).

Take as the result the arithmetic mean of the results of the two determinations.

5 TEST REPORT
The test report shall include the following particulars :

a) complete identification of the material tested;

b) the individual results and the mean;

c) type and amount of antistatic agent added, if applicable.

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Bulk Density Tester

- This product is produced strictly according to international standard ISO 60 bulk density Plastics
- Funnel, as per ISO 60 funnel
- Measuring cylinder
- Capacity 100ml
- Hopper stopper slider
- Internal dia. 45 mm Stand & Support Straightedge Calibration certificate (optional)
- Scale, accurate to 0,1 g (optional)

Category

1. Equipment for Standards
2. Standards