

Plastics — Phenolic mouldings — Determination of acetone-soluble matter

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies a gravimetric method for the determination of the amount of matter that can be extracted by acetone, at a temperature near its boiling point, from a finely ground sample of a phenolic moulding.

The test for acetone-soluble matter is one means for determining the relative degree of cure of phenolic mouldings made from a given material. The process of extraction is carried out under specified conditions for a specified time. Although a high proportion of soluble matter is determined, extraction is not necessarily complete. The results are only comparative, because the extracted material normally contains substances other than any uncured resin that may be present, for example lubricants, colouring matter and plasticizers.

2 PRINCIPLE

Hot extraction of acetone-soluble matter from a test portion which has been reduced to a finely divided state. Evaporation of the acetone, drying of the extract to constant mass and weighing of the dried extract.

3 REAGENT

Acetone, pure.

4 APPARATUS

4.1 Device for reducing the moulded sample to a finely divided state.

4.2 Sieve with nominal apertures of 425 μm , complying with ISO 565*.

4.3 Sieve with nominal apertures of 250 μm , complying with ISO 565*.

4.4 Analytical balance accurate to 0,0001 g.

4.5 Extraction apparatus of the type shown in the figure.

Alternatively, it is permissible to use a Soxhlet-type apparatus, in which the material in the thimble is surrounded by the vapour of the boiling solvent. Any other extraction apparatus may be used, provided that it can be shown to give similar results.

4.6 Oven, circulating air type, capable of being controlled at $50 \pm 2^\circ\text{C}$.

Dimensions in millimetres

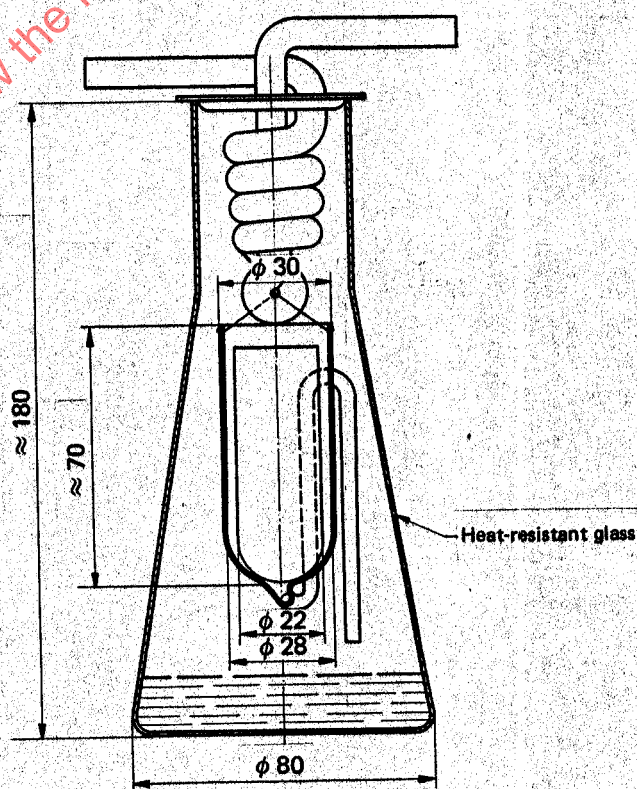


FIGURE — Extraction apparatus

* ISO 565, Test sieves — Woven metal wire cloth and perforated plate — Nominal sizes of apertures.