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INTERNATIONAL STANDARD 308

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

Plastics — Phenolic moulding materials — Determination of acetone-soluble matter (resin content of material in the unmoulded state)

Matières plastiques — Matières à mouler à base de phénoplastes — Détermination des matières solubles dans l'acétone (teneur en résine des matières à l'état non noulé)

First edition — 1976-08-01

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Descriptors : plastics, phenolic resins, moulding materials, chemical analysis, determination of content, dissolved matter, acetone.

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 308 and found it technically suitable for transformation. International Standard ISO 308 therefore replaces ISO Recommendation R 308-1963 to which it is technically identical.

ISO Recommendation R 308 was approved by the Member Bodies of the following countries :

Australia	India	Spain
Austria	Israel	Sweden
Belgium	Italy	Switzerland
Chile	Japan	Turkey
Czechoslovakia	Netherlands	United Kingdom
France	New Zealand	U.S.A.
Germany	Poland	U.S.S.R.
Hungary	Romania	

No Member Body expressed disapproval of the Recommendation.

No Member Body disapproved the transformation of ISO/R 308 into an International Standard.

Printed in Switzerland

Plastics — Phenolic moulding materials — Determination of acetone-soluble matter (resin content of material in the unmoulded state)

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 sample of finely divided phenolic moulding material. The method applies only to moulding materials based upon novolac resins and not to those based upon resols, as the latter type of resin may not be completely soluble in acetone.

In this International Standard the amount of acetone-soluble matter is reported as the resin content, but it should be noted that, although the extract consists mainly of phenolic resin and hexamine, other acetone-soluble components such as lubricants and colorants or natural resins from the filler are normally also present and will therefore be reported as resin.

2 PRINCIPLE

Hot extraction of the acetone-soluble matter from a finely divided test portion. Drying of the extract under controlled conditions and weighing of the dry extract.

3 REAGENT

Acetone, pure.

4 APPARATUS

4.1 Device for reducing coarse materials to a finer state of division.

4.2 Analytical balance, accurate to 0,001 g.

4.3 Extraction apparatus of the type shown in the figure. (A glass filter crucible may be used instead of a single-thickness extraction thimble.)

It is permissible to use a modified Soxhlet apparatus, provided that the material in the extraction thimble is surrounded by the vapour of the solvent at its boiling point. Any other extraction apparatus may be used, provided that it can be shown to give similar results.

4.4 Drying oven, capable of being controlled at approximately 105 °C.

4.5 Desiccator.

4.6 Weighing bottle, with ground glass stopper.

NOTE — The single-thickness extraction thimble free from acetone-soluble matter together with a loose plug of cotton wool, if used, also free from acetone-soluble matter, shall be dried for 2 h in the oven (4.4) at 105 °C approximately and stored in the desiccator (4.5) until required.

Dimensions in millimetres

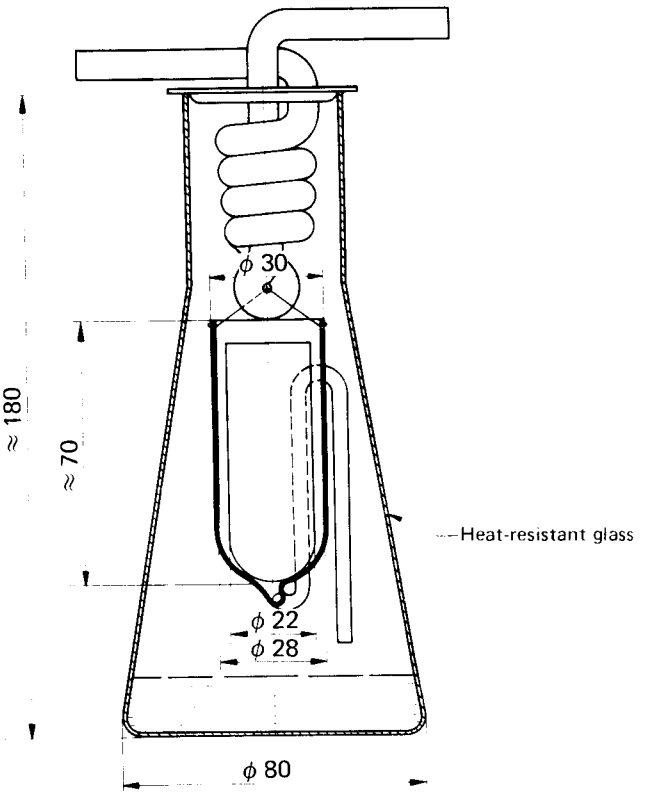

FIGURE — **Extraction apparatus**