

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 293

PLASTICS

COMPRESSION MOULDING TEST SPECIMENS OF THERMOPLASTIC MATERIALS

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BRIEF HISTORY

The ISO Recommendation R 293, *Plastics—Compression Moulding Test Specimens of Thermoplastic Materials*, was drawn up by Technical Committee ISO/TC 61, *Plastics*, the Secretariat of which is held by the American Standards Association, Inc. (ASA).

Work on this question by the Technical Committee began in 1954 and led, in 1958, to the adoption of a Draft ISO Recommendation.

In October 1959, this Draft ISO Recommendation (No. 318) was circulated to all the ISO Member Bodies for enquiry. It was approved by the following Member Bodies:

Argentina	Hungary	Poland
Australia	India	Romania
Austria	Israel	Spain
Belgium	Italy	Sweden
Burma	Japan	Switzerland
Chile	Mexico	United Kingdom
Czechoslovakia	Netherlands	U.S.A.
Germany	Portugal	U.S.S.R.

One Member Body opposed the approval of the Draft:

France.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1963, to accept it as an ISO RECOMMENDATION.

PLASTICS**COMPRESSION MOULDING TEST SPECIMENS
OF THERMOPLASTIC MATERIALS****1. SCOPE**

This ISO Recommendation covers only the general principles to be followed when compression moulding test specimens of thermoplastic materials. The exact conditions required to prepare adequate specimens vary for each plastics material. These conditions are properly a part of the specification for the material, or should be agreed upon by the seller and the purchaser.

NOTE. — It may be necessary to treat the moulding granules in some manner, prior to preparation of test specimens. Preheating, drying, etc. are often required, particularly with those plastics which absorb moisture.

2. GENERAL

The principal stages in the compression moulding process for thermoplastics are the following:

- (1) Raising of the temperature of the material to a level where application of pressure can cause sufficient flow without thermal decomposition taking place,
- (2) Application of pressure to the material, causing flow and assuming the shape of the mould in which it is contained,
- (3) Cooling of material to a temperature at which the moulding can be removed from the mould without distortion taking place.

3. SUITABLE TYPES OF MOULDS

Types of moulds which have been found suitable for use when compression moulding thermoplastic materials are described below and shown schematically in Figures 1 to 4 (page 5).

- 3.1 A simple type of mould which is suitable for many thermoplastic materials is the three-plate, frame type, examples of which are shown in Figures 1 and 1 A. In the interests of combining simplicity with reproducibility of results between testing organizations, this is the preferred type. However, other types, such as those described in clauses 3.2, 3.3 and 3.4 below, are not excluded.