
Plastics — Compression moulding of test specimens of thermoplastic materials

Plastiques — Moulage par compression des éprouvettes en matières thermoplastiques



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS

© ISO 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Apparatus	2
5	Procedure	4
6	Inspection of the moulded specimens or sheets	6
7	Specimen preparation report	6

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 293 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 9, *Thermoplastic materials*.

This third edition cancels and replaces the second edition (ISO 293:1986), of which it constitutes a minor revision intended, above all, to update the normative references (Clause 2).

Introduction

For reproducible test results, specimens with a defined state are required. In contrast to injection moulding, the aim of compression moulding is to produce test specimens and sheets for machining or stamping of test specimens that are homogeneous and isotropic.

In the process of compression moulding, mixing of material takes place on a negligible scale. Granules and powders fuse only at their surfaces and preforms (milled sheets) are only partially softened.

Isotropic and homogeneous specimens can, therefore, only be obtained when the moulding material is itself homogeneous and isotropic. This has to be considered when processing multiphase materials, such as ABS, which retain their internal structure.

This document is a preview generated by EVS

Plastics — Compression moulding of test specimens of thermoplastic materials

1 Scope

This International Standard specifies the general principles and the procedures to be followed with thermoplastics in the preparation of compression-moulded test specimens, and sheets from which test specimens may be machined or stamped.

In order to obtain mouldings in a reproducible state, the main steps of the procedure, including four different cooling methods, are standardized. For each material, the required moulding temperature and cooling methods are as specified in the appropriate International Standard for the material or as agreed between the interested parties.

The procedure is not recommended for reinforced thermoplastics.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 286-1, *Geometrical product specifications (GPS) — ISO coding system for tolerances of linear sizes — Part 1: Bases of tolerances and fits*

ISO 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

moulding temperature

temperature of the mould or the press during the preheating and moulding time, measured in the nearest vicinity to the moulded material

3.2

demoulding temperature

temperature of the mould or the press platens at the end of the cooling time, measured in the nearest vicinity to the moulded material

NOTE For positive moulds, holes are normally drilled in the mould for measuring the temperatures defined in 3.1 and 3.2.

3.3

preheating time

time required to heat the material in the mould up to the moulding temperature while maintaining the contact pressure