
**Fibre-reinforced plastics — Methods of
producing test plates —**

Part 8:

Compression moulding of SMC and BMC

*Plastiques renforcés de fibres — Méthodes de fabrication de plaques
d'essai —*

Partie 8: Moulage par compression des SMC et BMC



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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 1268-8 was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 13, *Composites and reinforcement fibres*.

Together with the other parts (see below), this part of ISO 1268 cancels and replaces ISO 1268:1974, which has been technically revised.

ISO 1268 consists of the following parts, under the general title *Fibre-reinforced plastics — Methods of producing test plates*:

- *Part 1: General conditions*
- *Part 2: Contact and spray-up moulding*
- *Part 3: Wet compression moulding*
- *Part 4: Moulding of prepegs*
- *Part 5: Filament winding*
- *Part 6: Pultrusion moulding*
- *Part 7: Resin transfer moulding*
- *Part 8: Compression moulding of SMC and BMC*
- *Part 9: Moulding of GMT/STC*
- *Part 10: Injection moulding of BMC and other long-fibre moulding compounds — General principles and moulding of multipurpose test specimens*
- *Part 11: Injection moulding of BMC and other long-fibre moulding compounds — Small plates*

Introduction

Compression moulding of SMC and BMC differs from that of all other compression-mouldable reinforced thermosetting materials. Because of the maturation process which typically takes place before moulding and the ability of the compound to flow during moulding, special procedures need to be used for the production of test plates from these compounds.

Two different methods are given for preparing the mould charge: method A for moulding without the material flowing in the mould and method B for moulding so that the material flows in the mould.

For engineers designing new moulds, knowledge of the anisotropy imparted to the moulding under defined moulding conditions is essential. It is therefore necessary for the test plates from which test specimens will be cut to be manufactured under comparable conditions.

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Fibre-reinforced plastics — Methods of producing test plates —

Part 8: Compression moulding of SMC and BMC

1 Scope

This part of ISO 1268 specifies the general principles and procedures for the compression moulding of test plates from two types of fibre-reinforced thermosetting moulding compound: sheet moulding compound (SMC) and bulk moulding compound (BMC).

The aim of this part of ISO 1268 is to ensure the preparation of flat test plates from which test specimens can be cut (for the relevant test methods, see Annex A). The plates are produced in such a way that specimens cut from them give representative results when used in these test methods.

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 472, *Plastics — Vocabulary*

ISO 8604, *Plastics — Prepregs — Definitions of terms and symbols for designations*

ISO 12115:1997, *Fibre-reinforced plastics — Thermosetting moulding compounds and prepregs — Determination of flowability, maturation and shelf life*

EN 1842, *Plastics — Thermoset moulding compounds (SMC - BMC) — Determination of compression moulding shrinkage*

3 Terms and definitions

For the purposes of this part of ISO 1268, the terms and definitions given in ISO 472 and ISO 8604, together with the the following, apply.

3.1

compression time

time during which the required pressure is applied to the mould

4 Health and safety

This part of ISO 1268 is limited to describing test plate preparation methods. The conditions under which the materials used are handled shall comply with the national regulations in force in each country and the staff shall be informed of the hazards involved and appropriate precautions taken.