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Plastics — Determination of temperature of deflection under load —

Part 3:

High-strength thermosetting laminates and long-fibre-reinforced plastics

Plastiques — Détermination de la température de fléchissement sous charge —

Partie 3: Stratifiés thermodurcissables à haute résistance et plastiques renforcés de fibres longues



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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 75-3 was prepared by Technical Committee ISO/TC 61, Plastics, Subcommittee SC 2, Mechanical properties.

This second edition cancels and replaces the first edition (ISO 75-3:1993), which has been technically revised.

ISO 75 consists of the following parts, under the general title *Plastics* — *Determination of temperature of deflection under load*:

- Part 1: General test method
- Part 2: Plastics and ebonite
- Part 3: High-strength thermosetting laminates and long-fibre-reinforced plastics

Introduction

In this edition of ISO 75-3, the test load is determined as a fraction of the flexural modulus of the material under test. This has the advantage that the test load is a fraction of the flexural strength of the material. The test determines the temperature-dependent decrease in the flexural modulus. Because tensile modulus and tensile strength are not necessarily related, using the flexural modulus to determine the test load leads to more readily comparable descriptions of material behaviour.

The strain increase at which the temperature of deflection under load is read has been increased from 0,1 % to 0,2 % to obtain greater commonality with ISO 75-2.

Unlike ISO 75-2, this part of ISO 75 only allows flatwise loading, as was already the case in the previous edition (ISO 75-3:1993).

In order to maintain consistency with ISO 10350-1:1998, $T_{\rm f}$ has been used as the symbol for temperature of deflection under load.