

This is a preview of "ISO 6721-7:2019". [Click here to purchase the full version from the ANSI store.](#)

Second edition
2019-04

Plastics — Determination of dynamic mechanical properties —

Part 7: Torsional vibration — Non- resonance method

*Plastiques — Détermination des propriétés mécaniques
dynamiques —*

Partie 7: Vibration en torsion — Méthode hors résonance



Reference number
ISO 6721-7:2019(E)

© ISO 2019

This is a preview of "ISO 6721-7:2019". Click here to purchase the full version from the ANSI store.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

This is a preview of "ISO 6721-7:2019". [Click here to purchase the full version from the ANSI store.](#)

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Test device	2
5.1 Loading assembly.....	2
5.1.1 General.....	2
5.1.2 Clamps.....	2
5.1.3 Transducers.....	2
5.2 Electronic data-processing equipment.....	3
5.3 Temperature measurement and control.....	3
5.4 Devices for measuring test specimen dimensions.....	3
6 Test specimens	3
6.1 General.....	3
6.2 Shape and dimensions.....	3
6.3 Preparation.....	3
7 Number of specimens	3
8 Conditioning	3
9 Procedure	3
9.1 Test atmosphere.....	3
9.2 Measuring the cross-section of the specimen.....	4
9.3 Clamping the specimen.....	4
9.4 Varying the temperature.....	4
9.5 Performing the test.....	4
10 Expression of results	5
10.1 Symbols.....	5
10.2 Calculation of the shear storage modulus G'	6
10.2.1 General.....	6
10.2.2 Avoidance of specimen resonance.....	6
10.2.3 Correction for transducer resonance.....	7
10.2.4 Correction for apparatus compliance.....	7
10.2.5 Application of a length correction.....	7
10.3 Calculation of the shear loss factor $\tan \delta_G$	8
10.4 Calculation of the shear loss modulus.....	8
10.5 Presentation of data as a function of temperature.....	8
11 Precision	8
12 Test report	8
Bibliography	10

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 61, *Plastics*, Subcommittee SC 5, *Physical-chemical properties*.

This second edition cancels and replaces the first edition (ISO 6721-7:1996), which has been technically revised. It also incorporates the Amendment ISO 6721-7:1996/Amd.1:2007. The main changes compared to the previous edition are as follows:

- the document has been revised editorially;
- normative references have been changed to undated.

A list of all parts in the ISO 6721 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.