

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS K 7244-1 : 1998

(ISO 6721-1 : 1994)

**Plastics—Determination of
dynamic mechanical properties—
Part 1 : General principles**

ICS 83.080.01

Descriptors : plastics, mechanical behaviour of materials, strength of materials,
mechanical testing, specifications

Reference number : JIS K 7244-1 : 1998 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

JIS K 7244 consists of the following parts, under the general title *Plastics—Determination of dynamic mechanical properties*:

Part 1 : General principles

Part 2 : Torsion-pendulum method

Part 3 : Flexural vibration—Resonance-curve method

Part 4 : Tensile vibration—Non-resonance method

Part 5 : Flexural vibration—Non-resonance method

Part 6 : Shear vibration—Non-resonance method

Part 7 : Torsional vibration—Non-resonance method

Date of Establishment: 1998-11-20

Date of Public Notice in Official Gazette: 1998-11-20

Investigated by: Japanese Industrial Standards Committee
Divisional Council on High Molecular
Materials

JIS K 7244-1:1998, First English edition published in 1999-08

Translated and published by: Japanese Standards Association
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Printed in Japan

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Plastics—Determination of dynamic mechanical properties— Part 1 : General principles

Introduction This Japanese Industrial Standard has been prepared based on ISO 6721-1 : 1994, *Plastics—Determination of dynamic mechanical properties—Part 1 : General principles* without modifying its technical content and structure.

The parts underlined with dots are items not included in the original International Standard.

1 Scope The various parts of this Standard specify methods for the determination of the dynamic mechanical properties of rigid plastics within the region of linear viscoelastic behavior. Part 1 is an introductory section which includes the definitions and all aspects that are common to the individual test methods described in the subsequent parts.

Different deformation modes may produce results that are not directly comparable. For example, tensile vibration results in a stress which is uniform across the whole thickness of the specimen, whereas flexural measurements are influenced preferentially by the properties of the surface regions of the specimen.

Values derived from flexural-test data will be comparable to those derived from tensile-test data only at strain levels where the stress-strain relationship is linear and for specimens which have a homogeneous structure.

2 Normative references The following standards contain provisions which, through reference in this text, constitute provisions of this part of the Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of the Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

ISO 291 : 1977 *Plastics—Standard atmospheres for conditioning and testing*

ISO 293 : 1986 *Plastics—Compression moulding test specimens of thermoplastic materials*

Informative reference : JIS K 7151 *Plastics—Compression moulding test specimens of thermoplastic materials* is identical with ISO 293.

ISO 294 : — *Plastics—Injection moulding of test specimens of thermoplastic materials*

Informative reference : JIS K 7152 *Plastics—Injection moulding of test specimens of thermoplastic materials* is identical with ISO 294.

ISO 295 : 1991 *Plastics—Compression moulding of test specimens of thermosetting materials*

ISO 1268 : 1974 *Plastics—Preparation of glass fibre reinforced, resin bonded, low-pressure laminated plates or panels for test purposes*