



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS Z 0240 : 2002
(JPI/JSA)

**Structural cushioning materials for
packaging—Determination of
cushioning performance**

ICS 55.040; 83.100

Reference number : JIS Z 0240 : 2002 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee, as the result of proposal for revision of Japanese Industrial Standard submitted by the Japan Packaging Institute (JPI)/the Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS Z 0240 : 1997** is replaced with this Standard.

Date of Establishment: 1997-09-20

Date of Revision: 2002-03-20

Date of Public Notice in Official Gazette: 2002-03-20

Investigated by: Japanese Industrial Standards Committee
Standards Board

Technical Committee on Logistics and
Distribution of Goods

JIS Z 0240 : 2002, First English edition published in 2003-09

Translated and published by: Japanese Standards Association
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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Printed in Japan

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Structural cushioning materials for packaging—Determination of cushioning performance

1 Scope This Japanese Industrial Standard specifies the testing methods of evaluation for structural cushioning materials from which the samples of regular size are unable to be taken.

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. If the indication of the year of publication is given to these referred standards, only the edition of indicated year constitutes the provision of this Standard but the revision and amendment made thereafter are not applied. The normative references without the indication of the year of publication apply limiting only to the most recent edition (including amendments).

JIS Z 0202 *Method of drop test for packaged freights*

JIS Z 0203 *Packaged freights—Conditioning for testing*

ISO 8568 : 1989 *Mechanical shock—Testing machines—Characteristics and performance*

3 Definitions For the purposes of this Standard, the following definitions apply:

- a) **structural cushioning material** Materials for packaging made to be cushioning structure by folding or combining corrugated fiberboards, cardboards, plastics sheets, etc. and by forming pulp mold, plastics moldings, etc. (hereafter referred to as “cushioning materials”).
- b) **load dummy** Imitated shape of product as a load for measuring cushioning properties.
- c) **equivalent free drop height** In the case of testing using the impact testing apparatus, free drop height that the collision velocity is equivalent to the velocity change of the impact table.

In addition, in the case of testing using the free drop testing apparatus, free drop height that gives the velocity equivalent to the collision velocity of a load dummy, and also called “Free drop height” simply.

- d) **maximum acceleration—mass diagram** Diagram expressing with the graduation of uniform scale or logarithmic scale taking the maximum acceleration of load dummy on the vertical axis and the mass of load dummy on the horizontal axis.
- e) **maximum impact strain—mass diagram** Diagram expressing on the vertical axis in uniform scale the maximum impact strain arising on the cushioning material and on the horizontal axis in logarithmic scale or uniform scale the mass of load dummy.