

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS Z 0119 : 2002

(JPI/JSA)

**Mechanical-shock fragility testing
methods for packaging and
products design**

ICS 17.160; 55.020

Reference number : JIS Z 0119 : 2002 (E)

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 0119 : 1994** is replaced with this Standard.

Date of Establishment: 1994-03-01

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 0119:2002, First English edition published in 2003-10

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

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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Mechanical-shock fragility testing methods for packaging and products design

1 Scope This Japanese Industrial Standard specifies the testing methods for evaluating the strength of products against shock by means of damage boundary curve based either on the permissible acceleration or permissible velocity change, or on both of them for the purpose of packaging and products design.

Remarks : The products mentioned here are the goods treated on the market as the commodities.

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 provisions of this Standard but the revision and amendment made thereafter are not applied. The normative references without the indication of the year of coming into effect apply limiting only to the most recent edition (including amendments).

JIS B 0153 *Glossary of terms used in mechanical vibration and shock*

JIS Z 0108 *Glossary of terms for packaging*

JIS Z 0203 *Packaged freights—Conditioning for testing*

Remarks : **ISO 2233** : 2000 *Packaging—Complete, filled transport packages and unit loads—Conditioning for testing* is identical with the said standard.

JIS Z 9015-0 *Sampling procedures for inspection by attributes—Part 0 : Introduction to the JIS Z 9015 attribute sampling system*

Remarks : **ISO 2859-0** : 1995 *Sampling procedures for inspection by attributes—Part 0 : Introduction to the ISO 2398 attribute sampling system* is identical with the said standard.

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

3 Definitions For the purposes of this Standard the definitions given in **JIS B 0153** and **JIS Z 0108**, and the following definitions apply:

- a) **mechanical-shock fragility** Permissible acceleration and permissible velocity change on the boundary in which damage, that might make the products lose their value, does not arise when applying a mechanical shock to the products by the methods specified in this Standard.
- b) **permissible acceleration** The maximum input acceleration durable without damage when applying a specified shock-pulse to the products.
- c) **velocity change** Sum of the absolute values of the shock velocity and rebound velocity of the shock table. Equivalent to the area of shock pulse.