

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS K 6410-3 : 2018

**Elastomeric seismic-protection
isolators for buildings—
Part 3: High-durability and
high-performance specifications,
and test methods**

ICS 83.140.99;91.120.25

Reference number : **JIS K 6410-3 : 2018 (E)**

K 6410-3 : 2018

Date of Establishment: 2018-02-20

Date of Public Notice in Official Gazette: 2018-02-20

Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area
Technical Committee on Chemical Products and
Analytical Methods

JIS K 6410-3:2018, First English edition published in 2018-10

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2018

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

KK/AT

PROTECTED BY COPYRIGHT

Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Symbols	2
5 Classification	2
5.1 Type	2
5.2 Grade	2
6 Requirements	3
6.1 General	3
6.2 Materials	3
6.3 Elastomeric isolators	3
7 Test methods	12
7.1 General	12
7.2 Test of dependency of compressive property	12
7.3 Test of dependency of shear property	14
7.4 Durability test	17
7.5 Ultimate tensile strain test	20
7.6 Test of dependency of tensile property	21
7.7 Test of tensile breaking stress and tensile breaking strain	23
8 Inspection	25
8.1 Type inspection and delivery inspection	25
8.2 Inspections on elastomeric isolators	25
9 Marking on products	30
9.1 Marking items	30
9.2 Position and method of marking	31
9.3 Marking examples	31

Foreword

This Japanese Industrial Standard has been established by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

JIS K 6410 series consists of the following 3 parts under the general title “*Elastomeric seismic-protection isolators for buildings*”:

Part 1: Specifications

Part 2: Test methods

Part 3: High-durability and high-performance specifications, and test methods

Elastomeric seismic-protection isolators for buildings—Part 3: High-durability and high-performance specifications, and test methods

Introduction

JIS K 6410-1 specifies the minimum requirements for elastomeric seismic-protection isolators for protecting buildings from an earthquake. This Japanese Industrial Standard is established to specify the high-durability and high-performance requirements and test methods of elastomeric seismic-protection isolators to respond to the diverse and highly advanced technical background. The number of performance items, handling of reliability on performance values and the like are added to overcome issues such as the long-period ground motion, considering their usage in the seismic-isolated buildings subjected to the cyclic external forces.

No corresponding International Standard has been established at this point.

1 Scope

This Standard specifies the requirements and test methods of high-durability and high performance elastomeric seismic-protection isolators used for the seismic-isolated structure of buildings subjected to the long period ground motion and/or the wind load.

WARNING Persons carrying out tests of elastomeric isolators and rubber materials based on this Standard should be familiar with normal laboratory practice. This Standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this Standard to establish appropriate safety and health practices.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 7721 *Tension/compression testing machines—Calibration and verification of the force-measuring system*

JIS G 3131 *Hot-rolled mild steel plates, sheet and strip*

JIS G 3141 *Cold-reduced carbon steel sheet and strip*

JIS K 6410-1 *Elastomeric seismic-protection isolators for buildings—Part 1: Specifications*

JIS K 6410-2 *Elastomeric seismic-protection isolators for buildings—Part 2: Test methods*

JIS Z 8401 *Guide to the rounding of numbers*