

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS A 9521 : 2017

Thermal insulation materials for buildings

ICS 91.100.60;91.120.10

Reference number : JIS A 9521 : 2017 (E)

A 9521 : 2017

Date of Establishment: 1979-03-01

Date of Revision: 2017-03-21

Date of Public Notice in Official Gazette: 2017-03-21

Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area
Technical Committee on Architecture

JIS A 9521:2017, First English edition published in 2017-12

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 2017

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
1	Scope 1
2	Normative references 1
3	Terms and definitions 2
4	Classification and product symbols 3
4.1	Classification 3
4.2	Product symbols 6
5	Quality 12
5.1	Characteristics 12
5.2	Dimensions 18
5.3	Appearance 20
6	Tests 21
6.1	Test site and conditioning before testing 21
6.2	Sampling and preparation of test specimen 21
6.3	Rounding off of numerical values 22
6.4	Appearance 22
6.5	Dimensions 22
6.6	Formaldehyde emission characteristics 26
6.7	Thermal conductivity 30
6.8	Density 31
6.9	Coefficient of moisture permeability 33
6.10	Compressive strength 34
6.11	Bending strength 34
6.12	Combustibility 35
6.13	Water absorption amount 35
6.14	Swelling in thickness after immersion in water 35
6.15	Moisture content 36
6.16	Thermal resistance 36
7	Inspections 37
7.1	Classification of inspections and inspection items 37
7.2	Acceptance 39
8	Marking 39
Annex A (normative)	Heat generation property test and evaluation method of covering materials 41
Annex B (normative)	Deformed thermal insulation materials 46

Annex C (normative)	Combustibility test method.....	49
Annex D (normative)	Water absorption test method	53
Annex E (normative)	Determination method of thermal resistance of deformed thermal insulation materials	55
Annex F (normative)	Thermal resistance of partially deformed thermal insulation materials	58
Annex G (informative)	Basic idea for evaluation method of thermal resistance of deformed thermal insulation materials	60
Annex H (informative)	Basic idea for evaluation method of thermal resistance of partially deformed thermal insulation materials	64
Annex I (informative)	Comparison table between previous and current editions of this Standard on technically significant revisions	68

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 in accordance with the Industrial Standardization Law. Consequently **JIS A 9521:2014** is replaced with this Standard.

However, **JIS A 9521:2014** may be applied in the **JIS** mark certification based on the relevant provisions of Article 19 Clause 1, etc. of the Industrial Standardization Law until March 20, 2018.

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.

Thermal insulation materials for buildings

1 Scope

This Japanese Industrial Standard specifies the thermal insulation materials mainly used for dwellings or buildings at the ordinary temperature (hereafter referred to as thermal insulation materials). This Standard is not applicable to the heat insulation materials used under atmospheric conditions of particular temperature and humidity such as a cold-storage warehouse, and the heat insulation materials used for facility equipment, piping, etc. for dwellings or buildings.

This Standard is applicable to the cellular plastic thermal insulation materials in which fluorocarbons¹⁾ are not used as a foaming agent.

The comparison table between previous and current editions of this Standard on technically significant revisions is given in Annex I.

Note ¹⁾ Generic term for hydrofluorocarbon (HFC), chlorofluorocarbon (CFC) and hydrochlorofluorocarbon (HCFC). Hydrofluoroolefin (HFO) (HFO-1233zd, HFO-1336mzz and others) does not fall under this category.

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 A 0202 *Thermal insulation—Vocabulary*

JIS A 1324 *Measuring method of water vapor permeance for building materials*

JIS A 1412-1 *Test method for thermal resistance and related properties of thermal insulations—Part 1: Guarded hot plate apparatus*

JIS A 1412-2 *Test method for thermal resistance and related properties of thermal insulations—Part 2: Heat flow meter apparatus*

JIS A 1420 *Determination of steady-state thermal transmission properties—Hot box method*

JIS A 1423 *Simplified test method for emissivity by infrared radio meter*

JIS A 1901 *Determination of the emission of volatile organic compounds and aldehydes by building products—Small chamber method*

JIS A 1902-1 *Determination of the emission of volatile organic compounds and aldehydes by building products—Sampling, preparation of test specimens and testing condition—Part 1: Boards, wallpaper and floor materials*

JIS A 1902-4 *Determination of the emission of volatile organic compounds and aldehydes by building products—Sampling, preparation of test specimens and testing condition—Part 4: Heat-Insulating material boards*