

# SLOVENSKI STANDARD oSIST prEN ISO 9229:2019

01-september-2019

# Toplotna izolacija - Slovar (ISO/DIS 9229:2019)

Thermal insulation - Vocabulary (ISO/DIS 9229:2019)

Wärmedämmung - Begriffe (ISO/DIS 9229:2019)

Isolation thermique - Vocabulaire (ISO/DIS 9229:2019)

Ta slovenski standard je istoveten z: prEN ISO 9229

# ICS:

01.040.27	Prenos energije in toplote (Slovarji)	Energy and heat transfer engineering (Vocabularies)
01.040.91	Gradbeni materiali in gradnja (Slovarji)	Construction materials and building (Vocabularies)
27.220	Rekuperacija toplote. Toplotna izolacija	Heat recovery. Thermal insulation
91.120.10	Toplotna izolacija stavb	Thermal insulation of buildings

oSIST prEN ISO 9229:2019 en,fr,de

**oSIST prEN ISO 9229:2019** 

Tell Standards in the brain of the brain of

# DRAFT INTERNATIONAL STANDARD ISO/DIS 9229

ISO/TC **163** Secretariat: **SIS** 

Voting begins on: Voting terminates on:

2019-07-22 2019-10-14

# Thermal insulation — Vocabulary

*Isolation thermique — Vocabulaire* 

ICS: 27.220; 01.040.27

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

This document is circulated as received from the committee secretariat.

# ISO/CEN PARALLEL PROCESSING



Reference number ISO/DIS 9229:2019(E)

© ISO 2019





# COPYRIGHT PROTECTED DOCUMENT

© ISO 2019

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Fax: +41 22 749 09 47 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

# **Contents**

Foreword		iv
1.	Scope	1
	Normative references	
3	Terms and definitions	
3.1	Thermal insulation materials	
3.2	Thermal insulation materials Thermal insulation products	-
3.3	Form of supply Thermal insulation, systems and applications	
3.4	Thermal insulation, systems and applications	12
3.5	Thermal insulation components	14
3.6	Common terms	15
3.7	Testing and certification terms	17
Anı	nex A (informative) Thermal insulation concept	20
Rih	liography	21

# **Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see <a href="www.iso.org/directives">www.iso.org/directives</a>).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see <a href="https://www.iso.org/patents">www.iso.org/patents</a>).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

This document was prepared by Technical Committee [or Project Committee] ISO/TC 163, "Thermal performance and energy use in the built environment".

This third edition cancels and replaces the second edition (ISO 9229:2007), which has been technically revised.

The main changes compared to the previous edition are as follows:

- Incoporation of the majority of comments received though the CD ballot
- Alignment of some of the definitions to EN 14303 and ISO 52000

A list of all parts in the ISO ##### series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at <a href="https://www.iso.org/members.html">www.iso.org/members.html</a>.

# Thermal insulation - Vocabulary

# 1. Scope

This International Standard establishes a vocabulary of terms used in the field of thermal insulation covering materials, products, components and applications. Some of the terms may have a different meaning when used in other industries or applications.

NOTE - In addition to terms used in English and French, two of the three official ISO languages (English, French and Russian), this document gives the equivalent terms in German; these are published under the responsibility of the member body for Germany (DIN), and are given for information only. Only the terms and definitions given in the official languages can be considered as ISO terms and definitions.

Tell Standards in the standards of the standard of the standar

# 2. Normative references

There are no normative references in this document.

# 3. Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at https://www.iso.org/obp
- IEC Electropedia: available at http://www.electropedia.org/

# 3.1 Thermal insulation materials

#### 3.1.1

### thermal insulation material

a substance that is intended to reduce heat transfer and that derives its insulation properties from its chemical nature, its physical structure or both

# 3.1.2

# cellular plastic

thermal insulation materials made from plastic, in which the density is reduced by the presence of numerous small cavities (cells), which may be interconnecting or not, dispersed throughout the material

# 3.1.2.1

# expanded polystyrene

### **EPS**

rigid cellular plastic thermal insulation material manufactured by moulding beads of expandable polystyrene or one of its co-polymers and that has a substantially closed-cell structure, filled with air ehalicatak

# 3.1.2.2

# extruded polystyrene foam

### **XPS**

rigid cellular plastic insulation material expanded and extruded from polystyrene or one of its co-polymers and that has a closed-cell structure

# 3.1.2.3

# flexible elastomeric foam

flexible foam made of natural or synthetic rubber, or a mixture of the two, and containing other polymers and other chemicals that may be modified by organic or inorganic additives

# 3.1.2.4

# phenolic foam

rigid cellular plastic thermal insulation material, the polymer structure of which is made primarily from the poly-condensation of phenol, its homologues and/or derivatives with aldehydes or ketones

# 3.1.2.5

# polyethylene foam

semi-rigid or flexible cellular plastic insulation material based on polymers derived mainly from ethylene and/or propylene

## 3.1.2.6

# polyurethane foam

# **PUR**

rigid or semi-rigid cellular plastic insulation material with a substantially closed-cell structure based on polyurethanes

# 3.1.2.7

# urea formaldehyde foam

cellular plastic insulation material with a substantially open-cell structure, based on an amino resin made by the polycondensation of urea with formaldehyde

### 3.1.2.8

# expanded polyvinyl chloride

rigid or semi-rigid cellular plastic insulation material based on vinyl chloride polymers expanded to form a cellular structure consisting substantially of closed cells

#### 3.1.2.9

# polyisocyanurate foam

### PIR

rigid cellular plastic insulation material with a substantially closed-cell structure based on polymers mainly of the isocyanurate type

#### 3.1.3

### cellular glass

rigid insulation material made from expanded glass with a closed-cell structure

#### 3.1.4

### calcium silicate

#### CC

thermal insulation material comprised of calcium oxide and silicon dioxide, normally reinforced by

incorporating fibres

3.1.5

aluminosilicate wool

ASW

amorphous High Temperature Insulating Wool (HTIW) predominantly produced by melting a combination of Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub>, and may contain 7rO<sub>2</sub> and CroO<sub>3</sub>. of Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub>, and may contain ZrO<sub>2</sub> and Cr<sub>2</sub>O<sub>3</sub>

# 3.1.6

# magnesia

thermal insulation material, composed principally of basic magnesium carbonate that incorporates fibre as a reinforcing agent

# 3.1.7

# expanded clay

lightweight granular material used for insulation purposes, having a cellular structure formed by expanding clay minerals by heat

# 3.1.8

# expanded perlite

# perlite

lightweight granular material used for insulation purposes, manufactured from naturally occurring volcanic rock, expanded by heat to form a cellular structure

# 3.1.9

# exfoliated vermiculite

# vermiculite

insulation material that results from expanding or exfoliating a natural micaceous mineral by heating

### 3.1.10

# diatomaceous insulation

insulation material composed mainly of the skeletons of diatoms (cellular siliceous particles of microscopic size)

Note 1 to entry: It is available in the form of a powder, bonded or granular material. See 3.2.10.