

BUREAU OF INDIAN STANDARDS

Program of Work

CHD 27 : Thermal Insulation

Scope: To formulate Indian Standards for terminology; methods of sampling and test; code of practice including decommissioning and disposals aspects of thermal insulating materials; specification for thermal insulation materials and cellular insulations (excluding cork and lingo-cellulesic materials)

Liaison: **ISO TC-163 (P):** *Thermal performance and energy use in the built environment* **ISO TC-163 SC-1 (P):** *Test and measurement methods* **ISO TC-163 SC-2 (O):** *Calculation methods* **ISO TC-163 SC-3 (P):** *Thermal insulation products, components and systems*

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS 10555 : 2002 <i>Reviewed In : 2024</i>	Exfoliated vermiculite - Specification (First Revision)	April, 2024	-	Indigenous
2	IS 10556 : 2014 <i>Reviewed In : 2024</i>	Storage and handling of thermal insulation materials Code of practice (First Revision)	May, 2024	-	
3	IS 11128 : 2018 <i>Reviewed In : 2023</i>	Spray applied hydrated calcium silicate thermal insulation	May, 2023	-	Indigenous
4	IS 11129 : 2018 <i>Reviewed In : 2023</i>	Method of test for tumbling friability of preformed block - Type thermal insulation (First Revision)	March, 2023	-	Indigenous
5	IS 11239 (Part 1) : 2009 ISO 1923:1981 <i>Reviewed In : 2024</i> <i>ISO 1923:1981</i>	Methods of test for rigid cellular thermal insulation materials: Part 1 dimensions	April, 2024	-	Identical under dual numbering
6	IS 11239 (Part 2) : 2019 ISO 845 : 2006 <i>Reviewed In : 2024</i> <i>ISO 845:2006</i>	Method of test for rigid cellular thermal insulation materials: Part 2 apparent density (Second Revision)	March, 2024	-	Identical under dual numbering
7	IS 11239 (Part 3) : 2009 ISO 2796 <i>Reviewed In : 2024</i> <i>ISO 2796:1986</i>	Method of test for rigid cellular thermal insulation materials: Part 3 dimensional stability (First Revision)	April, 2024	-	Identical under dual numbering
8	IS 11239 (Part 4) : 2014 ISO 1663 : 2007 <i>Reviewed In : 2024</i> <i>ISO 1663 : 2007</i>	Method of test for rigid cellular thermal insulation materials: Part 4 water vapour transmission rate (First Revision)	April, 2024	-	Identical under dual numbering
9	IS 11239 (Part 5) : 2019	Method of test for rigid cellular thermal insulation materials: Part 5	March, 2024	-	Identical under dual numbering

	ISO 4590 : 2016 Reviewed In : 2024 ISO 4590:2016	volume percent of open and closed cells (Second Revision)			
10	IS 11239 (Part 6) : 1985 Reviewed In : 2024	Methods of test for rigid cellular thermal insulation materials: Part 6 heat distortion temperature	April, 2024	-	Indigenous
11	IS 11239 (Part 7) : 1985 Reviewed In : 2024	Methods of test standard for rigid cellular thermal insulation materials: Part 7 coefficient of linear thermal expansion at low temperatures	April, 2024	-	Indigenous
12	IS 11239 (Part 8) : 2024	Rigid Cellular Thermal Insulation Materials - Methods of Test - Part 8 Flame Height, Time of Burning and Loss of Mass (First Revision)		-	Indigenous
13	IS 11239 (Part 8) : 1985 Reviewed In : 2024	Methods of test for rigid cellular thermal insulation materials: Part 8 flame height, time of burning and loss of mass	April, 2024	-	Indigenous
14	IS 11239 (Part 9) : 1988 Reviewed In : 2024 ISO 2896	Methods of test for rigid cellular thermal insulation materials: Part 9 water absorption	April, 2024	-	Not Equivalent
15	IS 11239 (Part 10) : 1985 Reviewed In : 2024	Methods of test for rigid cellular thermal insulation materials: Part 10 flexural strength	April, 2024	-	Indigenous
16	IS 11239 (Part 11) : 2024	Rigid Cellular Thermal Insulation Materials - Methods of Test - Part 11 Compressive Strength (First Revision)		-	Indigenous
17	IS 11239 (Part 11) : 1985 Reviewed In : 2024	Methods of test for rigid cellular thermal insulation materials: Part 11 compressive strength	April, 2024	-	Indigenous
18	IS 11239 (Part 12) : 1988 Reviewed In : 2024	Methods of test for rigid cellular thermal insulation materials: Part 12 horizontal burning characteristics	April, 2024	-	Indigenous
19	IS 11239 (Part 13) : 1992 Reviewed In : 2024	Methods - Of test for rigid cellular thermal insulation materials: Part 14 determination of flammability by oxygen index	April, 2024	1	Indigenous
20	IS 11307 : 1985 Reviewed In : 2022	Specification for cellular glass block and pipe thermal insulation	June, 2022	-	Indigenous
21	IS 11308 : 2024	Hydraulic Setting Thermal Insulating Castables for Temperatures up to 1 250 °C Specification (First Revision)		-	Indigenous
22	IS 12432 (Part 1) : 1988 Reviewed In : 2022	Code of practice for application of spray applied insulation: Part 1 mineral fibre	June, 2022	-	Indigenous
23	IS 12432 (Part 2) : 1999 Reviewed In : 2022	Application of spray insulation - Code of: Part 2 calcium silicate	June, 2022	-	Indigenous
24	IS 12432 (Part 3) : 2002 Reviewed In : 2024	Application of spray applied insulation - Code of practice: Part 3 polyurethane/polyisocyanurate	April, 2024	1	Indigenous
25	IS 12436 : 1988 Reviewed In : 2022	Specification for preformed rigid polyurethane (Pur) and polyisocyanurate (Pir) foams for	June, 2022	1	Indigenous

		thermal insulation			
26	IS 13204 : 2024	Rigid Phenolic Foam for Thermal Insulation â€™ Specification (First Revision)		-	Indigenous
27	IS 13205 : 2023	Application of Polyurethane Insulation by the In-Situ Pouring Method ? Code of Practice (First Revision)		-	Indigenous
28	IS 13286 : 1992 Reviewed In : 2022	Surface spread of flame for thermal insulation materials - Methods of test	June, 2022	1	Indigenous
29	IS 14164 : 2008 Reviewed In : 2024	Industrial application and finishings of thermal insulation materials at temperatures above - 80°C and up to 750°C - Code of practice (First Revision)	April, 2024	2	Indigenous
30	IS 14656 : 1999 Reviewed In : 2022	Ceramic fibre products - Methods of test	June, 2022	-	Indigenous
31	IS 15402 : 2003 Reviewed In : 2024	Ceramic fibre blanket insulation - Specification	April, 2024	1	Indigenous
32	IS 16203 : 2016 Reviewed In : 2021	Prefabricated polyurethane sandwich panels - Specification	October, 2021	-	Indigenous
33	IS 18652 : 2024 ISO 12241 : 2022 ISO 12241 : 2022	THERMAL INSULATION FOR BUILDING EQUIPMENT AND INDUSTRIAL INSTALLATIONS CALCULATION RULES		-	Identical under dual numbering
34	IS 18973 : 2024 8497 8497	Thermal insulation - Determination of steady-state thermal transmission properties of thermal insulation for circular pipes		-	Identical under dual numbering
35	IS 3069 : 2020 Reviewed In : 2024	Glossary of Terms, Symbols and Units Relating to Thermal Insulation Materials (Second Revision)	April, 2024	-	Indigenous
36	IS 3144 : 2024	Mineral Wool Thermal Insulation Materials - Method of Test (Third Revision)		-	Indigenous
37	IS 3144 : 1992 Reviewed In : 2022	Mineral wool thermal insulation materials - Method of test (Second Revision)	June, 2022	3	Indigenous
38	IS 3346 : 1980 Reviewed In : 2022	Method for the determination of thermal conductivity of thermal insulation materials (Two Slab, Guarded Hot - Plate Method) (First Revision)	June, 2022	-	Indigenous
39	IS 3677 : 1985 Reviewed In : 2022	Specification for unbonded rock and slag wool for thermal insulation (Second Revision)	June, 2022	1	Indigenous
40	IS 4671 : 2018 Reviewed In : 2023	Expanded polystyrene for thermal insulation purposes	July, 2023	-	Indigenous
41	IS 5688 : 2018 Reviewed In : 2023	Methods of Test for Preformed Block-Type and Pipe-Covering Type Thermal Insulation (Second Revision)	January, 2023	-	Indigenous
42	IS 5724 : 2018 Reviewed In : 2023	Thermal insulating cements - Methods of test (First Revision)	July, 2023	-	Indigenous
43	IS 6598 : 2018	Cellular concrete for thermal	June, 2023	-	Indigenous

	Reviewed In : 2023	insulation - Specification (First Revision)			
44	IS 661 : 2019	Thermal insulation of cold storage - Code of practice (Fourth Revision)	March, 2024	-	Indigenous
	Reviewed In : 2024				
45	IS 7509 : 2024	Thermal Insulating Cements i _{1/2} Specification (Second Revision)		-	Indigenous
46	IS 8154 : 2024	Preformed Calcium Silicate Insulation (For temperatures up to 650i _{1/2} C) i _{1/2} Specification (Second Revision)		-	Indigenous
47	IS 8183 : 2024	Bonded mineral wool - Specification		-	Indigenous
48	IS 9403 : 2018	Method of test for thermal conductance and transmittance of built - Up Section by means of guarded hot box (First Revision)	April, 2023	-	Indigenous
	Reviewed In : 2023				
49	IS 9428 : 2024	Preformed Calcium Silicate Insulation (For Temperature up to 950 Â°C) â€” Specification (Second Revision)		-	Indigenous
50	IS 9489 : 2018	Method of Test for Thermal Conductivity of Thermal Insulation Materials by Means of Heat Flow Meter (First Revision)	May, 2024	-	Indigenous
	Reviewed In : 2024				
51	IS 9490 : 2018	Method for determination of thermal conductivity of thermal insulation materials (Water Calorimeter Method) (First Revision)	August, 2023	-	Indigenous
	Reviewed In : 2023				
52	IS 9742 : 2024	Sprayed Mineral Wool Thermal Insulation i _{1/2} Specification (Second Revision)		-	Indigenous
53	IS 9743 : 2020	Thermal Insulation Finishing Cement — Specification (Second Revision)	April, 2024	-	Indigenous
	Reviewed In : 2024				
54	IS 9842 : 2024	Preformed fibrous pipe insulation - Specification		-	Indigenous

Standards under Development

Projects Approved

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Preliminary Draft Standards

SI. No.	Doc No.	Title
1	CHD 27 (25732)	Fire Performance for Thermal Insulation Materials to be Used in Building Equipments or Building Structures - Method of Test
2	CHD 27 (25792)	Flexible Aerogel blanket - Specification

Drafts Standards in WC Stage

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Draft Standards Completed WC Stage

SI. No.	Doc No.	Title
1	CHD 27 (24897)	Surface Spread of Flame for Thermal Insulation Materials - Methods of Test First Revision
2	CHD 27 (25020)	Application of spray applied insulation Code of practice Part 1 Mineral fibre
3	CHD 27 (25762)	Cellular Glass Block and Pipe Thermal Insulation - Specification First revision

Finalized Draft Indian Standard

SI. No.	Doc No.	Title
<i>No Records Found</i>		

Finalized Draft Indian Standards under Print

SI. No.	Doc No.	Title
1	CHD 27 (25021) Revision of: IS 12432:1999	Application of Spray Applied Insulation - Code of Practice Part 2 Calcium Silicate First Revision

Total Published Standards:49 Total Standards Under development:6

Aspect Wise Report

Product : 18
Code of Practices : 6
Methods of Test : 25
Terminology : 1
Dimensions : 0
System Standard : 0
Safety Standard : 0
Others : 0
Service Specification : 0
Process Specification : 0
Unclassified : 1

Annexure-I :List of Indian Standards Withdrawn/Superseded

SI. No.	IS No. & Year	Title
1	IS 10556 : 1983 Reviewed In : 2004	Code of practice for storage and handling of thermal insulation materials
2	IS 3690 : 1974 Reviewed In : 1990	Unbonded Glass Wool For Thermal Insulation
3	IS 5696 : 1970	Loose mineral wool rock wool and slag wool
4	IS 7240 : 1981 Reviewed In : 1990	Code of practice for industrial applications and finishing of thermal insulating materials at temperature from -80 C to 40 C
5	IS 7413 : 1981	Code of practice for thermal industrial application and finishing of thermal insulating materials at temperature above 40 C to 700 deg C
6	IS 7510 : 1974 Reviewed In : 1990	Thermal insulating cement type 350
7	IS 9350 : 1980 Reviewed In : 1990	Thermal Insulating Cement type 950

Annexure-II :List of Indian Product Standards

SI. No.	IS No. & Year	Title
1	IS 10555 : 2002 Reviewed In : 2024	Exfoliated vermiculite - Specification First Revision

2	IS 11128 : 2018 Reviewed In : 2023 ISO 24516- 1 - 2016	Spray applied hydrated calcium silicate thermal insulation
3	IS 11307 : 1985 Reviewed In : 2022	Specification for cellular glass block and pipe thermal insulation
4	IS 11308 : 2024	Hydraulic Setting Thermal Insulating Castables for Temperatures up to 1 250 C Specification First Revision
5	IS 12436 : 1988 Reviewed In : 2022	Specification for preformed rigid polyurethane Pur and polyisocyanurate Pir foams for thermal insulation
6	IS 13204 : 2024	Rigid Phenolic Foam for Thermal Insulation Specification First Revision
7	IS 15402 : 2003 Reviewed In : 2024	Ceramic fibre blanket insulation - Specification
8	IS 16203 : 2016 Reviewed In : 2021	Prefabricated polyurethane sandwich panels - Specification
9	IS 3677 : 1985 Reviewed In : 2022	Specification for unbonded rock and slag wool for thermal insulation Second Revision
10	IS 4671 : 2018 Reviewed In : 2023 11701 : 2009	Expanded polystyrene for thermal insulation purposes
11	IS 6598 : 2018 Reviewed In : 2023	Cellular concrete for thermal insulation - Specification First Revision
12	IS 7509 : 2024	Thermal Insulating Cements Specification Second Revision
13	IS 8154 : 2024	Preformed Calcium Silicate Insulation For temperatures up to 650 C Specification Second Revision
14	IS 8183 : 2024	Bonded mineral wool - Specification
15	IS 9428 : 2024	Preformed Calcium Silicate Insulation For Temperature up to 950 C Specification Second Revision
16	IS 9742 : 2024	Sprayed Mineral Wool Thermal Insulation Specification Second Revision
17	IS 9743 : 2020 Reviewed In : 2024	Thermal Insulation Finishing Cement Specification Second Revision
18	IS 9842 : 2024	Preformed fibrous pipe insulation - Specification