

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 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 Reviewed In : 2024	Exfoliated vermiculite - Specification (First Revision)	April, 2024	-	Indigenous
2	IS 10556:2014 Reviewed In : 2024	Storage and handling of thermal insulation materials - Code of practice (First Revision)	May, 2024	-	
3	IS 11128:2018 Reviewed In : 2023	Spray applied hydrated calcium silicate thermal insulation	May, 2023	-	Indigenous
4	IS 11129:2018 Reviewed In : 2023	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 Reviewed In : 2024 ISO 1923:1981	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 Reviewed In : 2024 ISO 845:2006	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 Reviewed In : 2024 ISO 2796:1986	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):2025 ISO 1663 : 2023	Method of Test for Rigid Cellular Thermal Insulation Materials Part 4 Water Vapour Transmission Rate		-	Identical under dual numbering

	ISO 1663 : 2023	(Second Revision)			
9	IS 11239 (Part 5):2019 ISO 4590 : 2016 Reviewed In : 2024 ISO 4590:2016	Method of test for rigid cellular thermal insulation materials: Part 5 volume percent of open and closed cells (Second Revision)	March, 2024	-	Identical under dual numbering
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 9):1988 Reviewed In : 2024 ISO 2896	Methods of test for rigid cellular thermal insulation materials: Part 9 water absorption	April, 2024	-	Not Equivalent
14	IS 11239 (Part 10):1985 Reviewed In : 2024	Methods of test for rigid cellular thermal insulation materials: Part 10 flexural strength	April, 2024	-	Indigenous
15	IS 11239 (Part 11):2024	Rigid Cellular Thermal Insulation Materials - Methods of Test - Part 11 Compressive Strength (First Revision)		-	Indigenous
16	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
17	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
18	IS 11307:2025 ISO 24285:2022 ISO 24285:2022	Cellular Glass Block and Pipe Thermal Insulation - Specification (First revision)		-	Identical under dual numbering
19	IS 11308:2024	Hydraulic Setting Thermal Insulating Castables for Temperatures up to 1 250 Å°C - Specification (First Revision)		-	Indigenous
20	IS 12432 (Part 1):2025	Application of spray applied insulation- Code of practice Part 1 Mineral fibre (First Revision)		-	Indigenous
21	IS 12432 (Part 2):2024	Application of Spray Applied Insulation - Code of Practice Part 2 Calcium Silicate (First Revision)		-	Indigenous
22	IS 12432 (Part 3):2002 Reviewed In : 2024	Application of spray applied insulation - Code of practice: Part 3 polyurethane/polyisocyanurate	April, 2024	1	Indigenous
23	IS 12436:1988 Reviewed In : 2022	Specification for preformed rigid polyurethane (Pur) and polyisocyanurate (Pir) foams for thermal insulation	June, 2022	1	Indigenous
24	IS 13204:2024	Rigid Phenolic Foam for Thermal Insulation - Specification (First		-	Indigenous

		Revision)			
25	IS 13205:2023	Application of Polyurethane Insulation by the In-Situ Pouring Method - Code of Practice (First Revision)		-	Indigenous
26	IS 13286:2025	Surface Spread of Flame for Thermal Insulation Materials - Methods of Test (First Revision)		-	Indigenous
27	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
28	IS 14656:1999 Reviewed In : 2022	Ceramic fibre products - Methods of test	June, 2022	-	Indigenous
29	IS 15402:2003 Reviewed In : 2024	Ceramic fibre blanket insulation - Specification	April, 2024	1	Indigenous
30	IS 16203:2016 Reviewed In : 2021	Prefabricated polyurethane sandwich panels - Specification	October, 2021	-	Indigenous
31	IS 18652:2024 ISO 12241 : 2022 ISO 12241 : 2022	Thermal insulation for building equipment and industrial installations calculation rules		-	Identical under dual numbering
32	IS 18973:2024 8497 ISO 8497 : 1994	Thermal insulation - Determination of steady-state thermal transmission properties of thermal insulation for circular pipes		-	Identical under dual numbering
33	IS 19304:2025	Flexible Aerogel blanket - Specification		-	Indigenous
34	IS 19306:2025	Fire Performance for Thermal Insulation Materials to be Used in Building Equipments or Building Structures - Method of Test		-	Indigenous
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 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
38	IS 3677:1985 Reviewed In : 2022	Specification for unbonded rock and slag wool for thermal insulation (Second Revision)	June, 2022	1	Indigenous
39	IS 4671:2018 Reviewed In : 2023	Expanded polystyrene for thermal insulation purposes	July, 2023	-	Indigenous
40	IS 5688:2018 Reviewed In : 2023	Methods of Test for Preformed Block-Type and Pipe-Covering Type Thermal Insulation (Second Revision)	January, 2023	-	Indigenous
41	IS 5724:2018 Reviewed In : 2023	Thermal insulating cements - Methods of test (First Revision)	July, 2023	-	Indigenous
42	IS 6598:2018	Cellular concrete for thermal insulation - Specification (First	June, 2023	-	Indigenous

	Reviewed In : 2023	Revision)			
43	IS 661:2019	Thermal insulation of cold storage - Code of practice (Fourth Revision)	March, 2024	-	Indigenous
	Reviewed In : 2024				
44	IS 7509:2024	Thermal Insulating Cements -Specification (Second Revision)		-	Indigenous
45	IS 8154:2024	Preformed Calcium Silicate Insulation (For temperatures up to 650 Â°C) - Specification (Second Revision)		-	Indigenous
46	IS 8183:2024	Bonded mineral wool - Specification Amendment - 1		1	Indigenous
47	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				
48	IS 9428:2024	Preformed Calcium Silicate Insulation (For Temperature up to 950 Â°C) - Specification (Second Revision)		-	Indigenous
49	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				
50	IS 9490:2018	Method for determination of thermal conductivity of thermal insulation materials (Water Calorimeter Method) (First Revision)	August, 2023	-	Indigenous
	Reviewed In : 2023				
51	IS 9742:2024	Sprayed Mineral Wool Thermal Insulation - Specification (Second Revision)		-	Indigenous
52	IS 9743:2020	Thermal Insulation Finishing Cement — Specification (Second Revision)	April, 2024	-	Indigenous
	Reviewed In : 2024				
53	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
<i>No Records Found</i>		

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
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No Records Found

Finalized Draft Indian Standard

SI. No.	Doc No.	Title
1	CHD 27 (27435) Revision of: IS 3346:1980	Method for the Determination of Thermal Conductivity of Thermal Insulation Materials Guarded Hot - Plate Method Second Revision

Finalized Draft Indian Standards under Print

SI. No.	Doc No.	Title
1	CHD 27 (02152)	Thermal Insulation of Cold Storage - Code of Practice
2	CHD 27 (02191) Revision of: IS 5724:2018	Methods of test for thermal insulating cements
3	CHD 27 (02192) Revision of: IS 6598:2018	Cellular concrete for thermal insulation
4	CHD 27 (02193) Revision of: IS 3346:1980	Method of the determination of thermal conductivity of thermal insulation materials two slab guarded hot plate method
5	CHD 27 (02194) Revision of: IS 5688:2018	Methods of test for preformed block-type and pipe covering type thermal insulation
6	CHD 27 (01772)	PREFABRICATED POLYURETHANE SANDWICH PANELS - SPECIFICATION
7	CHD 27 (02196) Revision of: IS 11128:1984	Spray applied hydrated calcium silicate thermal insulation
8	CHD 27 (02197) Revision of: IS 11129:2018	Method of test for tumbling friability of preformed block-type thermal insulation
9	CHD 27 (02199) Revision of: IS 4671:1984	Expanded polystyrene for thermal insulation purposes
10	CHD 27 (02200) Revision of: IS 9403:2018	Method of test for thermal conductance and transmittance of built up sections by means of guarded hot box
11	CHD 27 (02201) Revision of: IS 9489:1980	Method of test for thermal conductivity of materials by means of heat flow meter
12	CHD 27 (02045)	Methods of test for mineral wool thermal insulation materials Amendment - 3
13	CHD 27 (10074) Revision of: IS 9490:2018	METHOD FOR DETERMINATION OF THERMAL CONDUCTIVITY OF THERMAL INSULATION MATERIALS WATER CALORIMETER METHOD First Revision
14	CHD 27 (12400) Revision of: IS 3069:2020	GLOSSARY OF TERMS SYMBOLS AND UNITS RELATING TO THERMAL INSULATION MATERIALS Second Revision
15	CHD 27 (12551) Revision of: IS 11239:2019	Method of test for rigid cellular thermal insulation materials Part 5 Volume percent of open and closed cells
16	CHD 27 (12552) Revision of: IS 11239:2019	Method of test for rigid cellular thermal insulation materials Part 2 Apparent density
17	CHD 27 (12600)	Draft amendment no 2 to IS 14164 2008 Industrial application and finishings of thermal insulation materials at temperatures above -80 C and up to 750 C - code of practice First Revision Industrial application and finishing of thermal insulation
18	CHD 27 (13508) Revision of: IS 8183:1993	Bonded mineral wool - Specification
19	CHD 27 (13509) Revision of: IS 9842:1994	Preformed fibrous pipe insulation - Specification
20	CHD 27 (14291) Revision of: IS 9743:2020	Thermal insulation finishing cement - specification
21	CHD 27 (20329) Revision of: IS 9742:1993	Sprayed Mineral Wool Thermal Insulation Specification Second Revision
22	CHD 27 (20338) Revision of: IS 9428:1993	Preformed Calcium Silicate Insulation For temperature up to 950 C Specification Second Revision
23	CHD 27 (20340) Revision of: IS 8154:1993	Preformed Calcium Silicate Insulation For temperatures up to 650 C Specification Second Revision
24	CHD 27 (20341) Revision of: IS 7509:1993	Thermal Insulating Cements Specification Second Revision
25	CHD 27 (20342) Revision of: IS 13205:1991	Application of Polyurethane Insulation by the In-Situ Pouring Method Code of Practice First Revision

26	CHD 27 (20345) Revision of: IS 13204:1991	Rigid Phenolic Foam for Thermal Insulation Specification First Revision
27	CHD 27 (20346) Revision of: IS 11308:1985	Hydraulic Setting Thermal Insulating Castables for Temperatures up to 1 250 C Specification First Revision
28	CHD 27 (20646) Revision of: IS 3144:1992	Mineral Wool Thermal Insulation Materials - Method of Test Third Revision
29	CHD 27 (22732)	THERMAL INSULATION FOR BUILDING EQUIPMENT AND INDUSTRIAL INSTALLATIONS CALCULATION RULES
30	CHD 27 (24897) Revision of: IS 13286:1992	Surface Spread of Flame for Thermal Insulation Materials - Methods of Test First Revision
31	CHD 27 (24920)	Thermal insulation - Determination of steady-state thermal transmission properties of thermal insulation for circular pipes
32	CHD 27 (25020) Revision of: IS 12432:1988	Application of spray applied insulation- Code of practice Part 1 Mineral fibre First Revision
33	CHD 27 (25021) Revision of: IS 12432:1999	Application of Spray Applied Insulation - Code of Practice Part 2 Calcium Silicate First Revision
34	CHD 27 (25288) Revision of: IS 11239:1985	Rigid Cellular Thermal Insulation Materials - Methods of Test - Part 8 Flame Height Time of Burning and Loss of Mass First Revision
35	CHD 27 (25291) Revision of: IS 11239:1985	Rigid Cellular Thermal Insulation Materials - Methods of Test - Part 11 Compressive Strength First Revision
36	CHD 27 (25732)	Fire Performance for Thermal Insulation Materials to be Used in Building Equipments or Building Structures - Method of Test
37	CHD 27 (25762) Revision of: IS 11307:1985	Cellular Glass Block and Pipe Thermal Insulation - Specification First revision
38	CHD 27 (25792)	Flexible Aerogel blanket - Specification
39	CHD 27 (27230) Revision of: IS 11239:2014	Method of Test for Rigid Cellular Thermal Insulation Materials Part 4 Water Vapour Transmission Rate Second Revision
40	CHD 27 (27240) Revision of: IS 14656:1999	Ceramic Fibre Products - Methods of Test First Revision
41	CHD 27 (27268) Revision of: IS 3677:1985	Unbonded Rock and Slag Wool for Thermal Insulation - Specification Third Revision
42	CHD 27 (28242)	Bonded mineral wool - Specification Amendment - 1

Total Published Standards:49 Total Standards Under development:43

Aspect Wise Report

Product : 19
Code of Practices : 6
Methods of Test : 26
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

Sl. 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	Code of practice for industrial applications and finishing of thermal insulating materials at

	Reviewed In : 1990	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 11307:2025 ISO 24285:2022	Cellular Glass Block and Pipe Thermal Insulation - Specification First revision
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 19304:2025	Flexible Aerogel blanket - Specification
10	IS 3677:1985 Reviewed In : 2022	Specification for unbonded rock and slag wool for thermal insulation Second Revision
11	IS 4671:2018 Reviewed In : 2023 11701 : 2009	Expanded polystyrene for thermal insulation purposes
12	IS 6598:2018 Reviewed In : 2023	Cellular concrete for thermal insulation - Specification First Revision
13	IS 7509:2024	Thermal Insulating Cements -Specification Second Revision
14	IS 8154:2024	Preformed Calcium Silicate Insulation For temperatures up to 650 C - Specification Second Revision
15	IS 8183:2024	Bonded mineral wool - Specification Amendment - 1
16	IS 9428:2024	Preformed Calcium Silicate Insulation For Temperature up to 950 C - Specification Second Revision
17	IS 9742:2024	Sprayed Mineral Wool Thermal Insulation - Specification Second Revision
18	IS 9743:2020 Reviewed In : 2024	Thermal Insulation Finishing Cement Specification Second Revision
19	IS 9842:2024	Preformed fibrous pipe insulation - Specification