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BUREAU OF INDIAN STANDARDS

AGENDA

Name of the Committee	No. of Meeting	Day	Date	Time	Mode	Venue
Solid Electrical Insulating Materials and Insulation Systems Sectional Committee, ETD 02	29th	Wednesday	11.12.2024	1030 h to 1730 h	Physical	Mimaansa (White Room) BIS, New Delhi

ITEM 0 GENERAL

0.1 Welcome and Opening Remarks by the Chairman

Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

1.1 The minutes of the 28th meeting of Solid Electrical Insulating Materials and Insulation Systems, SectionalCommittee, ETD 02 held on 11-09-2024 was circulated vide BIS letter No. ETD 02 dated 05-11-2024. No comments have been received.

The Committee may formally confirm the minutes.

ITEM 2 COMPOSITION OF ETD 02- SOLID ELECTRICAL INSULATING MATERIALS AND INSULATIONSYSTEMS SECTIONAL COMMITTEE

2.1 The present composition of ETD 02 Sectional Committee, Panel and Subgroups are given in **Annex 1.**

The committee may note

2.2 Status of Participation of Members in the Previous Two Meetings.

The status of participation of Members in previous two meetings is attached at **Annex 2**

The Committee may note.

2.3 Sector Wise Classification of ETD 02 Sectional Committee

The sector wise classification of ETD 02 Sectional Committee is given at **Annex 3**

The committee may note

2.4 Co-option Requests received

Sl. No.	Name of the Organization	Name and Designation of the Nominated Representative
1	In Individual Capacity	Mr. Abhaey KKulthe
2	Elantas Beck India Ltd, Pune	Mr. Bapu Gawade-Principal Member Mr. Atul Titar- Alternate Member
3	Umang Boards Ltd, Jaipur	Mr. Umang Dhanuka

The relevant documents with respect to the above-mentioned nominations are given at **Annex 4**.

The committee may decide.

ITEM 3 ACTIONS ARISING OUT OF PREVIOUS MEETING

Sl. No.	Item No. of last minutes	Subject	Decision taken during the previous meetings	Remarks
1	5.0	NWIP-Heat Shrinkable Sleeve Testing	It has been decided in the 27th Meeting of ETD 02 Sectional Committee to study the IEC Standards available on 'Heat Shrinkable Sleeves' and their test methods and explore the possibility of their adoption as Indian Standards. The working Panel 2 has been requested to complete the study before the next meeting of the ETD 02 Sectional Committee. It has also been decided to obtain inputs from the relevant stakeholders with respect to the usage of Dual Wall and Triple Wall Heat Shrinkable Sleeves. Decision with respect to the finalization of Draft TOR on 'testing of heat Shrinkable Sleeves' has been deferred by the committee due to the aforesaid reasons. It was informed to the committee by the Member Secretary during the last meeting that the subject has also been given to an intern Ms. Prajakta Pawar as an internship project for submitting a pre-standardization report on the same. The report was awaited and would be circulated to the committee on receipt of the same. Working Panel 2 has been asked to complete the study of IEC Standards available on 'Heat Shrinkable Sleeves' and examine the pre-standardisation report on Heat Shrinkable Sleeves after circulation and submit a report to the committee. Decision on the TOR will be taken after receipt of the report of the Working Panel 2.	The inputs received from Ms. Ashitha P N, CPRI Bengaluru is reproduced below: '*For heat shrink accessories, during the last meeting reference was made to IEC 60684-2 : 2011. Problem faced in lab for accessories and component test is the lack of a definite procedure. When components are submitted separately for tests either a separate Indian standard can be formulated, else IEC can be adopted.* *With tubing such as dual wall and triple wall used, IEC 60684-2 refers to the use of tubes in as received condition. For example if insulating tube is to be tested, and if the accessory/component does not have insulating tube, in such cases, outer stress grading layer is removed and inner insulation is tested. However IEC specifies the direct use of the dual wall tube without any further sample treatment. This have not yet been tried in lab.* *Other committee members may please provide your views - formulate separate Indian standard with same sample handling procedure as with IEC. This standard would be comprehensive and covers - anti tracking tube, insulating tube, stress control, dual wall, triple wall if any and outer protective sleeve. or. align with IEC in the appropriate parts of 60684-2.* The Pre-Standardization report has been circulated to the committee members vide email dated 07.11.2024 for review. *The committee may deliberate and decide.*

ITEM 4 PRESENT POSITION OF WORK

The Programme of Work under ETD 02 Solid Electrical Insulating Materials and Insulation Systems Sectional Committee is given in **Annex 5.**

The committee may note.

ITEM 5 REVIEW OF INDIAN STANDARDS FOR REVISION/REAFFIRMATION

5.1 As per the guidelines, published Indian Standards should be reviewed after every five years. If no revision is called for, the standard(s) may be re-affirmed. Reaffirmation of the standard(s), however, does not prevent from these standard(s) being taken up for revision. It was informed by the Member Secretary in the last meeting that the reports of the Action Research Projects (ARP) submitted by the BIS officers have been circulated to the members of ETD 02 Sectional Committee through Standards Portal and requested the members to review and provide inputs on the reports so that decision for further course of action (i.e. Revision/Reaffirmation/Archiving/Withdrawal) can be taken.

The Standards due for review are given in **Annex 6.**

The committee may deliberate and decide.

5.2 Indian Standards adopted /Harmonized with IEC which are due for review:

The committee decided to review the Indian Standards adopted/Harmonized with IEC which are due for review (except for the standards reaffirmed in the last meeting dated 19.06.2024) and submit a report on the further course of action (i.e. Revision/Reaffirmation/Archiving/Withdrawal) by 24.09.2024. List of Adopted/Harmonized Indian Standards are given in **Annex 7.**

The committee may deliberate and decide.

5.3 Review of Indian Standards exceeding timelines.

The list of Indian Standards exceeding timelines were communicated through email dated 18/11/2024 for review by the committee members. The ARP reports submitted by the BIS officers along with the revised IEC standards were also sent along with the email for the review by the committee members.

The list of Indian Standards which have exceeded the timeline for review is attached at **Annex 8.**

The committee may review and decide.

5.4 Revision of IS 7809 (Series) and IS 15652:2006.

a) It was decided in the last meeting to constitute a working panel for the revision of IS 7809 (Series) in consultation with the chair. The reports were also circulated to all the members along with the agenda of the last meeting.

The proposed working Group/Panel for the preparation of the draft of IS 7809 (Series) is being Constituted.

The committee may deliberate and decide.

b) The committee requested Working Panel 01 constituted for the revision of IS 15652:2006 during the last meeting to complete the examination of all the comments received on IS 15652, review the report submitted by intern Sh. Annu Kumari and submit a report by 24.09.2024.

The Panel may update the committee.

ITEM 6 COMMENTS RECEIVED ON INDIAN STANDARDS UNDER ETD 02-SOLID ELECTRICAL INSULATING MATERIALS AND INSULATION SYSTEMS SECTIONAL COMMITTEE

Sl. No.	IS No. & Title	Decision taken during the last meeting	Remarks
1	IS 15652: 2006-Insulating Matsfor Electrical Purposes	The committee requested Working Panel 01 constituted for the revision of IS 15652:2006 to complete the examination of all the comments received on IS 15652, review the report submitted by intern Sh. Annu Kumari and submit a report by 24.09.2024.	Panel 1 may update the committee.

ITEM 7 QUERIES RECEIVED ON AVAILABILITY OF INDIAN STANDARDS

Sl. No.	**Query**	**Query received from**	**Decision taken during the last meeting**	**Remarks**
1	Availability of Indian Standards on "Silicone Sleeves for Overhead Conductors"	BIS, Ahmedabad Branch Office (AHBO)- Ms. Anjali Raval, Suresh Enterprises, Mehsana, Gujarat	It was informed by the Member Secretary during the last meeting that the subject has been given to an intern Sh. Nawaz Mandevali as an internship project for submitting a pre-standardization report on the same. The committee requested the Member Secretary to circulate the pre-standardisation report on 'Silicone Sleeves for overhead conductors' to the ETD 02 Sectional Committee on receipt of the same from intern Sh. Nawaz Mandevali, for review. Further, it has been decided that the committee may collect inputs from utilities and relevant stakeholders with respect to the usage of 'Silicon Sleeves for Overhead Conductors', that may be useful for the formulation of Indian Standard on the same	The Pre-Standardization report has been circulated to the committee members vide email dated 07.11.2024 for review. The Inputs with respect to formulation of New Standard on "Silicone Sleeves for Overhead Conductors" have been received from M/s Suresh Enterprises, Mehasana". The same is attached at **Annex 9**. Technical data sheet of M/s 3 A Associates Incorporated has also been received from Sh. Anand Gadodia. The same is attached at **Annex 10**. *The committee may deliberate and decide.*

ITEM 8 INTERNATIONAL ACTIVITIES

8.1 India is a 'P' (Participating) Member in the corresponding IEC TC 15 and IEC TC 112. Close interaction is being maintained with this Technical Committees by way of voting, sending India's comments on the documentsreceived from IEC and participating in the various IEC TC 15 and IEC TC 112 meetings by the experts nominated.

The Programme of Work (POW) of **IEC TC 15 and IEC TC 112** are given in **Annex 11.**

The committee may note

8.2 As a `P' member of **IEC TC 15** and **IEC TC 112**, India has an obligation to send voting on IEC drafts andcomments wherever necessary. The details of voting/comments sent since 26th meeting of ETD 02 Sectional Committee is given in **Annex 12**

The committee may note

8.3 Identification of IEC publications for harmonization

The Indian standards which were formulated/revised based on the IEC standards, are to be reviewed when thecorresponding IEC standards are revised.

The committee may consider.

The list of published IEC Standards corresponding to **IEC TC 15** and **IEC TC 112** are given at **Annex 13.**

8.4 Review of the Projects under IEC TC 15 and IEC TC 112 and designation of experts

The projects under progress at IEC TC 15 and IEC TC 112 and the experts designated against them are given in the table below.

Sl. No.	Project No.	Title of the Project	TC	WG/MT/ PT	Level of Interest (High/Medium /Low)	Designated Expert
1	112/628/NP	Electrical insulating Materials and Systems-DC Voltage Endurance Evaluation	TC 112	WG-3	High	a. Ms. Sneha Sheth, ERDA, Vadodara b. Ms. Ashitha Parambalath Narendran, CPRI Bengaluru
2	112/644/NP	Evaluation of hydrophobicity retention of polymeric insulating materials under high voltage stress with the dynamic drop test.	TC 112	WG-5	High	a. Ms. Sneha Sheth, ERDA, Vadodara b. Ms. Ashitha Parambalath Narendran, CPRI Bengaluru c. Dr. Palash Mishra, NIT Warangal
3	112/643/CD V	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	TC 112	WG-5	High	a. Ms. Sneha Sheth, ERDA, Vadodara b. Ms. Ashitha Parambalath Narendran, CPRI Bengaluru
4	112/654/CD	Recommended test methods for determining the relative resistance of insulating materials to breakdown by surface discharges	TC 112	WG-3	High	a. Ms. Sneha Sheth, ERDA, Vadodara b. Ms. Ashitha Parambalath Narendran, CPRI Bengaluru

5	112/635/CD	Electrical insulating materials -Thermal endurance properties - Part 1: Ageing procedures and evaluation of test results	TC 112	WG-1	High	a. Ms. Sneha Sheth, ERDA Vadodara b. Dr. Nilesh Pandya, Electrical Testing Centre, Vadodara
6	15/986/NP	Specification for cellulosic papers for electrical purposes – Part 3: Specifications for individual materials – Sheet 6: Press paper	TC 15	PT 60554-3-6	Medium	Ms. Sneha Sheth, ERDA Vadodara
7	15/1034/CDV	IEC 60684-2 ED4 Flexible insulating sleeving - Part 2: Methods of test	TC 15	WG-5	High	a. Ms. Sneha Sheth, ERDA Vadodara b. Ms. Ashitha Parambalath Narendran, CPRI Bengaluru

The committee may review.

8.5 Review of Nominated Experts in IEC TC 15 and IEC TC 112

8.5.1 The Expert mentioned in the table below has been removed from the working groups under IEC TC 112 as decided during last meeting dated 11.09.2024.

Sl. No.	Working Groups under IEC TC 112	Experts Removed	Remarks
1	WG-3 (Electric Strength)	Mr. R Sarathi	*The committee may note*
2	WG-4 (Dielectric/Resistive Properties)	Mr. R Sarathi	
3	WG-5 (Tracking)	Mr. R Sarathi	

8.5.2 The list of experts nominated in various working groups under IEC TC 15 and IEC TC 112 are attached at **Annex 14**.

The committee may note.

8.6 Upcoming New Work Items at IEC TC 112.

The following NWIP's have been approved during the Plenary Meeting of IEC TC 112.

a. Accelerated Test methods for determining the relative resistance of insulating materials to breakdown by surface discharges-IEC 60343-2 Ed 1.

b. Selection Guide for Polymeric materials for internal insulation of bushings under HV stress.

c. New Multi-Factor Standard to evaluate Mechanical and Dielectric withstand of resin treated insulation constructions.

d. Calibration of space charge measuring equipment based on the pulsed electro-acoustic (PEA) measurement principle - Part 2: High temperature measurement-IEC TS 62758-2.

The committee may note.

8.7 Participation in the Future IEC TC 15 and IEC TC 112 Meetings.

ITEM 9 Participation of Indian Delegation in the Plenary Meeting of IEC TC 112 scheduled in Viena (Austria) on 04th October 2024.

The Indian Delegation comprising of the following delegates participated in the Plenary Meeting of IEC TC 112 held in Viena (Austria) on 04th October 2024.

Sl. No.	Name and Organization of the Delegate	Mode of Participation
1	Ms. Sneha Sheth, ERDA Vadodara	Physical
2	Mr. Abinash Bordoloi, BIS	Physical

The delegates briefed the committee about the important discussions held and important decisions taken during the meeting during the de-briefing meeting held on 06.11.2024.

The committee may note.

ITEM 10 Participation of Indian Delegation in the Technical Committee meetings under IEC TC 15 scheduled in Vienna, Austria during 11/11/2024 to 14/11/2024.

The Indian Delegation comprising of the following delegates participated in the Plenary Meeting of IEC TC 15 held in Viena (Austria) during 11/11/2024 to 14/11/2024.

Sl. No.	Name and Organization of the Delegate	Mode of Participation
1	Ms. Sneha Sheth, ERDA Vadodara	Physical

Th delegate may brief the committee.

ITEM 11 Inputs on Bondable Silicon Rubber Tapes

It was informed by the member secretary that inputs from the utilities and relevant stakeholders with respect to the usage of 'Bondable Silicone Rubber Tapes used for Electrical Insulation is to be collected as decided during the last meeting. The committee has been requested to obtain inputs from utilities and relevant stakeholders with respect to the usage of 'Silicon Sleeves for Overhead Conductors', that may be useful for the formulation of Indian Standard on the same.

Inputs have been received from Sh. Anand Gadodia, 3 A Associates Incorporated on the product along with the product catalogue. The same is attached at **Annex 15**.

The committee may deliberate and decide.

ITEM 12 DATE AND PLACE FOR THE NEXT MEETING

The next meeting will be scheduled in the next quarter as per the Annual Action Plan for Standardization (2024-2025) in consultation with the Chairman. However, meetings in addition to that proposed in the meeting calendar of APS (2024-2025) may also be organized in consultation with the chair as per the exigency of work.

ITEM 13 ANY OTHER BUSINESS

ANNEX 1

ETD 02-Solid Electrical Insulating Materials and Insulation Systems Sectional CommitteeComposition

S.No.	Organization	Member Name	Member Email	Member Phone	Role
1	Power Grid Corporation of India, Gurugram	Shri S. J. Lahiri	sjlahiri@powergrid.in	9434742001	Chairperson
2	3 A Associate Incorporated, Vapi	Shri Anand Gadodia	akgadodia@3aassociate.com	9322597333	Principal Member
3	BSES Yamuna Power Limited, New Delhi	Shri Puneet Duggal	puneet.duggal@relianceada.com	8010609427	Principal Member
		Shri Abhishek Vashistha	ABHI.VASHISTHA.EE@GMAIL.COM	8010929980	Alternate Member
4	Bharat Heavy Electrical Limited, New Delhi	Shri Akshay Dave	adave@bhel.in	9425604959	Alternate Member
		Smt. Ratnadeepika Kommuri	krdeepika@bhel.in	8008898949	Alternate Member
		Shri Surya Prasad M N V	mnvsprasad@bhel.in	9490493767	Principal Member
5	Central Electricity Authority, New Delhi	Shri Mohit Mudgal	mohitmudgal@nic.in	9873454092	Alternate Member
		Shri Bhanwar Singh Meena	bhanwar.cea@gov.in	8750251805	Principal Member
6	Central Power Research Institute, Bengaluru	Shri Sadasiva Murthy P	ssmurthy@cpri.in	9458568583	Alternate Member
		Ms Ashitha P N	ashitha@cpri.in	9034895469	Principal Member
7	Consumer Voice, New Delhi	Shri H. Wadhwa	technical@consumer-voice.org	9873478225	Principal Member
8	Dupont, India	Shri Sailesh Purohit	saileshpurohit@gmail.com	9004350940	Principal Member
9	Electrical Research and Development Association, Vadodara	Ms Sneha Sheth	sneha.sheth@erda.org	9913257580	Principal Member
		Dr. U.N.Puntambekar	uday.puntambekar@erda.org	9978940953	Alternate Member
10	Electrical Testing Center, Vadodara	Nilesh Pandya	etc@etcglobal.in	9537372370	Principal Member
11	Fine Finish Organics Private Limited, Mumbai	Dr. G. S. Prabhu	gopalakrishna.prabhu@finefinish.net	9821922324	Principal Member
		Ms. Karishma Prabhu	karishma.prabhu@finefinish.net	9821933534	Alternate Member
12	Indian coating and adhesive tape industry association (ICATA), New Delhi	Ajit Gupta	ez@ajitindustries.com	9810032455	Principal Member
13	National Institute of Technology, Warangal	Palash Mishra	pmishra@nitw.ac.in	9566160482	Principal Member
14	National Test House, Ghaziabad	Shri Ritu Raj Srivastava	r.srivastava@nth.gov.in	7011683981	Principal Member
		Ms. L. Jayanthi	jayanthi@nth.gov.in	9840911303	Alternate Member
15	Power Grid Corporation of India, Gurugram	Shri Raju Kumar Jaiswal	raj.jaiswal@powergrid.in	9408494131	Principal Member
16	Sabic Research & Technology Private Limited, Bengaluru	Shri Sunil Kumar Rauto	sunil.rauto@sabic.com	9742856573	Principal Member
		Sumanda Bandyopadhyay	Sumanda.Bandyopadhyay@SABIC.COM	8884966997	Alternate Member
17	Schneider Electric India Private Limited, Gurugram	Shri Satheesh Kumar Paramasivam	satheesh.paramasivam@se.com	9019765235	Principal Member
18	3 M Electro & Communication India Pvt. Ltd	Shri Sanjay Jha	sjha@mmm.com	9972572451	Principal Member
		Shri Permeet Singh	psingh@mmm.com	9008302121	Alternate Member
		Shri Ashish Agarwal	aagrawal@mmm.com	9199441480	Alternate Member

Working Panel 1: Revision of IS 15652

No.	Name of member	Organization	
1	Shri Bhanwar Singh Meena	CEA (Convener)	
2	Shri Vinit Kumar Singh	Power Grid	
3	Ms. Ashitha P N	CPRI	
4	Ms. Sneha Sheth	ERDA	
5	Shri D K Chaturvedi	NTPC	

Working Panel 2: **NWIP on Heat Shrinkable sleeve testing**

Sr. no.	Name of member	Organization	Scope of the Working Panel
1	Ms Ashitha P N	CPRI (Convener)	
2	Ms. Sneha Sheth	ERDA	
3	Shri Anand Gadodia	3A Associate Incorporated	
4	Shri Permeet Singh	3 M ELECTRO	

Working Panel 3: Cellulosic/Non-Cellulosic Papers/Fabrics

Sl. No.	Name of the Member and Organization	Scope of the Working Panel 3
1	Ms. Sneha Sheth, ERDA — **Convenor**	Work related to formulation of any New Indian Standards and Revision of Existing Indian Standards on Cellulosic/Non-Cellulosic Papers/Fabrics within a time period as decided by the committee.
2	Shri Sailesh Purohit, Dupont	
3	Shri Ashish Agarwal, 3M Electro & Communications Pvt. Ltd	
4	Shri Vinit Kumar Singh, PGCIL	

Working Panel 4: Polymeric/Elastomeric Insulation and Ceramics

Sl. No.	Name of the Member and Organization	Scope of the Working Panel 4
1	Shri Sailesh Purohit, Dupont — **Convenor**	Work related to formulation of any New Indian Standards and Revision of Existing Indian Standards on Polymeric/Elastomeric Insulation and Ceramics within a time period as decided by the committee.
2	Ms Ashitha P N, CPRI	
3	Shri Ashish Agarwal, 3M Electro & Communications Pvt. Ltd	
4	Shri Raju Kumar Jaiswal, PGCIL	
5	Shri Sunil Kumar Rauto, SABIC Research & Technology Pvt. Ltd	
6	Shri Permeet Singh, 3M Electro & Communications Pvt. Ltd	
7	Shri Anand Gadodia, 3A Associates Incorporated	

Working Panel 5: Resins/Varnishes

Sl. No.	Name of the Member and Organization	Scope of the Working Panel 5
1	Sh. Anand Gadodia, 3A Associates Incorporated- **Convenor**	Work related to formulation of any New Indian Standards and Revision of Existing Indian Standards on Resins/Varnishes within a time period as decided by the committee.
2	Ms Sneha Sheth, ERDA	
3	Dr. G S Prabhu, Fine Finish Organics Pvt. Ltd	
4	Sh. Vinit Kumar Singh, PGCIL	
5	Sh. Ashish Agarwal, 3 M Electro& Communications Pvt. Ltd	

ANNEX 2

Status of Participation in Last 2 Meeting of ETD 02 Sectional Committee

S.No.	Organization	Member Name	Member Email	Member Phone	Role	Last 2 Meeting Attdenance
1	Power Grid Corporation of India, Gurugram	Shri S. J. Lahiri	sjlahiri@powergrid.in	9434742001	Chairperson	2/2
2	3 A Associate Incorporated, Vapi	Shri Anand Gadodia	akgadodia@3aassociate.com	9322597333	Principal Member	2/2
3	BSES Yamuna Power Limited, New Delhi	Shri Puneet Duggal	puneet.duggal@relianceada.com	8010609427	Principal Member	2/2
		Shri Abhishek Vashistha	abhi.vashistha.ee@gmail.com	8010929980	Alternate Member	
4	Bharat Heavy Electrical Limited, New Delhi	Shri Akshay Dave	adave@bhel.in	9425604959	Alternate Member	2/2
		Smt. Ratnadeepika Kommuri	krdeepika@bhel.in	8008898949	Alternate Member	
		Shri Surya Prasad M N V	mnvsprasad@bhel.in	9490493767	Principal Member	
5	Central Electricity Authority, New Delhi	Shri Mohit Mudgal	mohitmudgal@nic.in	9873454092	Alternate Member	2/2
		Shri Bhanwar Singh Meena	bhanwar.cea@gov.in	8750251805	Principal Member	
6	Central Power Research Institute, Bengaluru	Shri Sadasiva Murthy P	ssmurthy@cpri.in	9458568583	Alternate Member	2/2
		Ms Ashitha P N	ashitha@cpri.in	9034895469	Principal Member	
7	Consumer Voice, New Delhi	Shri H. Wadhwa	technical@consumer-voice.org	9873478225	Principal Member	2/2
8	Dupont, India	Shri Sailesh Purohit	saileshpurohit@gmail.com	9004350940	Principal Member	2/2
9	Electrical Research and Development Association, Vadodara	Ms Sneha Sheth	sneha.sheth@erda.org	9913257580	Principal Member	2/2
		Dr. U.N.Puntambekar	uday.puntambekar@erda.org	9978940953	Alternate Member	
10	Electrical Testing Center, Vadodara	Shri Nilesh Pandya	etc@etcglobal.in	9537372370	Principal Member	1/1
11	Fine Finish Organics Private Limited, Mumbai	Dr. G. S. Prabhu	gopalakrishna.prabhu@finefinish.net	9821922324	Principal Member	2/2
		Ms. Karishma Prabhu	karishma.prabhu@finefinish.net	9821933534	Alternate Member	
12	Indian coating and adhesive tape industry association (ICATA), New Delhi	Shri Ajit Gupta	ez@ajitindustries.com	9810032455	Principal Member	0/1
13	National Institute of Technology, Warangal	Dr. Palash Mishra	pmishra@nitw.ac.in	9566160482	Principal Member	1/1
14	National Test House, Ghaziabad	Shri Ritu Raj Srivastava	r.srivastava@nth.gov.in	7011683981	Principal Member	2/2
		Ms. L. Jayanthi	jayanthi@nth.gov.in	9840911303	Alternate Member	
15	Power Grid Corporation of India, Gurugram	Shri Raju Kumar Jaiswal	raj.jaiswal@powergrid.in	9408494131	Principal Member	2/2
16	Sabic Research & Technology Private Limited, Bengaluru	Shri Sunil Kumar Rauto	sunil.rauto@sabic.com	9742856573	Principal Member	2/2
		Sumanda Bandyopadhyay	Sumanda.bandyopadhyay@sabic.com	8884966997	Alternate Member	
17	Schneider Electric India Private Limited, Gurugram	Shri Satheesh Kumar Paramasivam	satheesh.paramasivam@se.com	9019765235	Principal Member	2/2

* Nominations approved during 27th ETD 02 Sectional Committee Meeting dated 19.06.2024.

ANNEX 3
SECTORS-SUBSECTORS UNDER ETD 02

Sectional Committee	Sectors under ETD 02 Sectional Committee	Sub Sectors under ETD 02 Sectional Committee	IS No	Title of Indian Standard
ETD 02- Solid Electrical Insulating Materials and Systems Sectional Committee	Polymeric Materials	Resins & Varnishes	IS 10026 (Part 1) : 1998	Insulating varnishes containing solvents: Part 1 definitions and general requirements (First Revision)
			IS 10026 (Part 2) : 1999	Insulating varnishes containing solvents: Part 2 methods of tests (First Revision)
			IS 10026 (Part 3/Sec 1) : 1999	Insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 1 requirements for cold curing finishing varnishes (First Revision)
			IS 10026 (Part 3/Sec 2) : 1999	Insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 2 requirements for hot curing varnishes (First Revision)
			IS 10026 (Part 3/Sec 3) : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 3 air drying varnishes with temperature index 130
			IS 10026 (Part 3/Sec 4) : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 4 baking varinishes with temperature index 120
			IS 10026 (Part 3/Sec 5) : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 5 baking varnishes with temperature index 130
			IS 10026 (Part 3/Sec 6) : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 6 baking varnishes with temperature index 155
			IS 10026 (Part 3/Sec 7) : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 7 baking varnishes with temperature index 180
			IS 10026 (Part 3/Sec 8) : 1986	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 8 baking varnishes with temperature index 200
			IS 10026 (Part 3/Sec 9) : 1986	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 9 baking varnishes with temperature index 130 for magnetic core sheets
			IS 10333 : 1982	Specification for epoxy resin systems for cast resin insulated power and control cable joints and terminations up to and including 11 kV
			IS 13465 (Part 1) : 2005	Resin based reactive compounds used for electrical insulation: Part 1 definitions and general requirements (First Revision)
			IS 13465 (Part 2) : 2005	Resin based reactive compounds used for electrical insulation: Part 2 methods of test (First Revision)
			IS 13465 (Part 3/Sec 1) : 2006	Resin based reactive compounds used for electrical insulation: Part 3 specifications for individual materials: Sec 1 unfilled epoxy resinous compounds (First Revision)
			IS 13465 (Part 3/Sec 2) : 2006	Resin based reactive compounds used for electrical insulation: Part 3 specifications for individual materials: Sec 2 quartz filled epoxy resinous compounds (First Revision)
			IS 13465 (Part 3/Sec 3) : 2006	Resin based reactive compounds used for electrical insulation: Part 3 specifications for individual materials: Sec 3 unfilled polyurethane compounds (First Revision)

			IS 13465 (Part 3/Sec 4) : 2006	Resin based reactive compounds used for electrical insulation: Part 3 specifications for - Individual materials: Sec 4 filled polyurethane compounds (First Revision)
			IS 13465 (Part 3/Sec 5) : 1998	Solventless polymerisable resinous compounds used for electrical insulation - Specification: Part 3 specifications for individual materials: Sec 5 epoxy phenol novolac resin
			IS 13465 (Part 3/Sec 6) : 2006	Resin based reactive compounds used for electrical insulation 2006: Part 3 specifications for individual materials: Sec 6 unsaturated polyester based impregnating resins
		Press Boards and Related Materials	IS 1576 : 1992	Solid pressboard for electrical purposes - Specification (First Revision)
			IS 16498 (Part : Part) : 2017	Specification for Pressboard and Presspaper for Electrical Purposes Part 2 Methods of Tests
			IS 16498 (Part 1) : 2018	Specification for Pressboard and Presspaper for Electrical Purposes Part 1 Definitions and General Requirements
			IS 16498 (Part 3/Sec 1) : 2019	Specification for Pressboard and Presspaper for Electrical Purposes Part 3 Specifications for Individual Materials Sheet 1 Requirements for pressboard, types B.0.1, B.0.3, B.2.1, B.2.3, B.3.1, B.3.3, B.4.1, B.4.3, B.5.1, B.5.3 and B.6.1
			IS 16498 (Part 3/Sec 2) : 2019	Specification for Pressboard and Presspaper for Electrical Purposes Part 3 Specifications for Individual Materials Sheet 2 : Requirements for Presspaper, Types P.2.1, P.4.1, P.4.2, P.4.3 and P.6.1
			IS 16499 (Part 1) : 2017	Laminated Pressboard for Electrical Purposes Part 1 Definitions, Classification and General Requirements
			IS 16499 (Part 3/Sec 1) : 2019	Laminated Pressboard for Electrical Purposes Part 3 Specifications for Individual Materials — Sheet 1 : Requirements for Laminated Pre Compressed Pressboard, Types LB3.1A.1, and LB3.1A.2
			IS 4248 : 1967	Specification for non - Ignitable and self - Extinguishing boards (With Mineral Base) for electrical purposes
			IS 4249 : 1967	Classification and methods of tests for non - Ignitable and self - Extinguishing properties of solid electrical insulating materials
			IS 8570 : 1977	Specification for presspaper for electrical purposes
		Elastomeric Materials	IS 15652 : 2006	Insulating mats for electrical purposes - Specification
		Plastic Films	IS 11298 (Part 1) : 1985	Specification for plastic films for electrical purposes: Part 1 definitions and general requirements
			IS 11298 (Part 2) : 2024	Plastic Films for Electrical Purposes Specification Part 2 Methods of Test (Second Revision)
			IS 11298 (Part 3/Sec 1) : 1991	Plastic films for electrical purposes - Specification: Part 3 specifications for individual materials: Sec 1 polypropylene films for capacitors (First Revision)
			IS 11298 (Part 3/Sec 2) : 1990	Plastic films for electrical purposes - Specification: Part 3 specifications for individual materials: Sec 2 metallized polypropylene films
			IS 11298 (Part 3/Sec 3) : 2024	Plastic Films for Electrical Purposes Specification Part 3 Individual Materials Specifications Section 3 Balanced Biaxial Oriented Polyethylene Terephthalate (PET) Films Used For Electrical Insulation Requirements (First Revision)
			IS 11298 (Part 3/Sec 4) : 1998	Plastic films for electrical purposes: Part 3 specifications for individual materials: Sec 4 requirements for polycarbonate (PC) films used for electrical insulation

			IS 11298 (Part 3/Sec 8) : 1998	Plastic films for electrical purposes: Part 3 specifications for individual materials: Sec 8 requirements for fluoroethylene - Propylene (FEP) films used for electrical insulation
			IS 11298 (Part 3/Sec 57) : 2024	Plastic Films for Electrical Purposes Part 3 individual materials Specifications Sections 5 to 7 Requirements for Polyimide Films Used for Electrical Insulation (First Revision)
		Insulating tapes	IS 7809 (Part 1) : 1975	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 1 general requirements
			IS 7809 (Part 2) : 1977	Specification for pressure sensitive adhesive tapes for electrical purpose : Part 2 methods of test
			IS 7809 (Part 3/Sec 1) : 1986	Specification for pressure sensitive adhesive insulating tapes for electrical purposes: Part 3 requirements or individual materials: Sec 1 plasticized polyvinylchloride tapes with non - Thermosetting adhesive (First Revision)
			IS 7809 (Part 3/Sec 2) : 1981	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 Specifications for individual materials: Sec 2 Polyester film tapes (PETP) with thermosetting adhesive
			IS 7809 (Part 3/Sec 3) : 1981	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specification for individual materials: Sec 3 polyster film tapes (PETP) with non - Thermosetting adhesive
			IS 7809 (Part 3/Sec 4) : 1977	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specifications for individual materials: Sec 4 cellulosic paper, creped with thermosetting adhesive
			IS 7809 (Part 3/Sec 5) : 1977	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specifications for individual materials: Sec 5 cellulosic paper with thermosetting adhesive
			IS 15208 : 2002	Unidirectional non - Woven semi - Cured glass fibre tape - Specification
			IS 2448 (Part 1) : 1963	Specification for adhesive insulating tapes for electrical purposes: Part 1 tapes with cotton textile substrates
			IS 6230 : 1970	Specification for woven asbestos tape for electrical insulating purposes
			IS 7755 : 1975	Specification for high tension insulating cotton tape impregnated with bitumen - Based compound
		lexible Insulating Sleeve	IS 11654 (Part 1) : 2024	Flexible Insulating Sleeving Part 1 Definitions and General Requirements
			IS 11654 (Part 2) : 2024	Flexible Insulating Sleeving Part 2 Methods of Test (First Revision)
			IS 11654 (Part 3/Sec 1) : 1988	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 1 general purpose grade sleeving with temperature index 90
			IS 11654 (Part 3/Sec 103) : 1989	Specification for flexible insulating sleevings: Part 3 specifications for individual types of sleevings: Sec 103 general purpose - Grade sleeving with unilateral tolerances with temperature index 90
			IS 11654 (Part 3/Sec 403) : 1989	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 403 glass textile sleeving with acrylic based coating - High breakdown strength
			IS 11654 (Part 3/Sec 404) : 1989	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 404 glass textile sleeving with acrylic based coating - Medium breakdown strength

			IS 11654 (Part 3/Sec 405) : 1989	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 405 glass textile sleeving with acrylic based coating - Lower breakdown strength
			IS 11654 (Part 3/Sec 406) : 1989	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 406 glass textile sleeving with pvc based coating - High breakdown strength
			IS 11654 (Part 3/Sec 407) : 1989	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 407 glass textile sleeving with pvc based coating - Medium breakdown strength
			IS 11654 (Part 3/Sec 408) : 1989	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 408 glass textile sleeving with pvc based coating - Lower breakdown strength
		Papers (Cellulosic/Non-Cellulosic)	IS 12316 (Part 1) : 1988	Specification for non - Cellulosic papers for electrical purposes: Part 1 definitions and general requirements
			IS 12316 (Part 2) : 1988	Specification for non - Cellulosic papers for electrical purposes: Part 2 methods of test
			IS 12316 (Part 3/Sec 1) : 1988	Specification for non - Cellulosic papers for electrical purposes: Part 3 requirements for individual materials: Sec 1 unfilled aramid (Aromatic Polyamide) papers calendered
			IS 12316 (Part 3/Sec 2) : 1988	Specification for non-cellulosic papers for electrical purposes: Part 3 requirements for individual materials: Sec 2 unfilled aramid (Aromatic Polyamide) paper, uncalendered
			IS 9335 (Part 1) : 2024	Cellulosic Papers for Electrical Purposes Specification Part 1 Definitions and General Requirements (First Revision)
			IS 9335 (Part 2) : 2024	Cellulosic Papers for Electrical Purposes Part 2 Methods of Test (Second Revision)
			IS 9335 (Part 3/Sec 1) : 1984	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 1 general purpose electrical paper
			IS 9335 (Part 3/Sec 2) : 1985	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 2 capacitor paper
			IS 9335 (Part 3/Sec 3) : 1984	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 3 crepe paper
			IS 9335 (Part 3/Sec 4) : 1984	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 4 electrolytic capacitor paper
			IS 9335 (Part 3/Sec 5) : 1985	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 5 special papers
		mbined Flexible Mater	IS 12747 (Part 1) : 2011	Combined flexible materials for electrical insulation: Part 1 definitions and general requirements (First Revision)
			IS 12747 (Part 2) : 2012	Combined flexible materials for electrical insulation: Part 2 methods of test (First Revision)
			IS 12747 (Part 3) : 2015	Combined flexible materials for electrical insulation: Part 3 specifications for individual materials (First Revision)
		Fabrics	IS 11297 (Part 1) : 1985	Specification for varnished fabrics for electrical purposes: Part 1 definitions and general requirements

			IS 11297 (Part 2) : 1988	Specification for varnished fabrics for electrical purposes: Part 2 methods of tests
			IS 11297 (Part 3/Sec 1) : 1988	Specification for varnished fabrics for electrical purposes: Part 3 specifications for individual materials: Sec 1 glass fabric backed varnished fabrics
			IS 13066 : 1991	Prepreg based on glass woven fabric for electrical applications - Specification
		Vulcanised Fibres & Fibre Based Materials	IS/IEC 60667-1 : 2020	Vulcanized fibre for Electrical Purposes Part 1 Definitions and General Requirements
			IS/IEC 60667-2 : 2020	Vulcanized fibre for electrical purposes Part 2 Methods of test
			IS/IEC 60667-3-1) : 2020	Vulcanized Fibre for Electrical Purposes Part 3 Individual Materials Specifications Section 1 Flat Sheets
			IS 5711 : 1970	Specification for vulcanized fibre rods and tubes for electrical purposes
			IS 5596 : 1970	Methods of test for determining deleterious substances in fibrous insulating materials
		Bitumen	IS 7084 : 1973	Specification for bitumen - Based filling compounds for electrical purposes
	Ceramic Materials	Mica and Mica Products	IS 13335 : 1992	Muscovite mica scrap for mica paper - Specification
			IS 13357 : 1992	Methods of grading and visual classification of muscovite mica splittings
			IS 13884 : 1993	Muscovite mica flakes and mica powder for industrial applications
			IS 2464 : 1963	Specification for built-up mica for electrical purposes
			IS/IEC 60371-1 : 2003	Specification for insulating materials based on MICA: Part 1 definitions and general requirements
			IS/IEC 60371-2 : 2004	Specification for insulating materials based on MICA: Part 2 methods of test
			IS/IEC 60371-3-1 : 2006	Specification for insulating materials based on mica, Part 3 Specification for individual materials, Section 1 Commutator Separators and materials
			IS/IEC 60371-3-2 : 2005	Specification for Insulating Materials Based on MICA, Part 3 Specification for Individual Materials Section 2 Mica Paper
			IS/IEC 60371-3-3 : 1983	Specification for Insulating Materials Based on MICA, Part 3 Specification for Individual Materials Section 3 Specification for Rigid Mica Materials for Heating Equipment
			IS/IEC 60371-3-4 : 1992	Specification for insulating materials based on MICA, Part 3 Specifications for individual materials Section 4 Polyester film-backed mica paper with a B-stage epoxy resin binder
			IS/IEC 60371-3-5 : 2005	Specification for Insulating Materials Based on MICA, Part 3 Specification for Individual Materials, Section 5 Glass-Backed Mica Paper with an Epoxy Resin Binder for Post Impregnation (VPI)
			IS/IEC 60371-3-6 : 1992	Specification for Insulating Materials based on MICA, Part 3 Specifications for Individual Materials, Section 6 Glass backed Mica Paper with a B-stage Epoxy Resin Binder
			IS/IEC 60371-3-7 : 1995	Specification for Insulating Materials Based on MICA Part 3 Specification for Individual Materials Section 7 Polyester Film Mica Paper with an Epoxy Resin Binder for Single Conductor Taping
			IS/IEC 60371-3-8 : 1995	Specification for Insulating Materials Based on MICA Part 3 Specification for Individual Materials Section 8 Mica Paper Tapes for Flame Resistant Security Cables

			IS/IEC 60371_3_9 : 1995	Specification for Insulating Materials Based on MICA Part 3 Specification for Individual Materials Section 9 Moulding Micanite
			IS 9043 : 1979	Method for grading (By Size) of phlogopite mica blocks, thins and splittings
			IS 9044 : 1979	Method of measuring thickness of mica blocks, thins, films and splittings
			IS 9045 : 1979	Thermal classification of phlogopite mica splittings
			IS 9455 : 1980	Classification of muscovite mica blocks, thins and films based on electrical properties
			IS 9502 : 1980	Specification for muscovite mica components for electronic equipment
			IS 1175:1981	Methods for grading and classification of muscovite mica blocks, thins and films (First Revision)
		Glass materials	IS 10192 : 1982	Specification for synthetic resin bonded glass fibre (SRBGF) for electrical purposes
			IS 12317 (Part 1) : 1988	Specification for ceramic and glass insulating materials for telecommunication and allied purposes: Part 1 general requirements and classification of ceramic and glass insulating materials
		Ceramic Materials	IS 6659 : 1976	Electronic Grade Ceramic Materials
			IS 7571 : 1974	Methods of tests for ceramics for telecommunication and allied purposes
	Evaluation of Insulating materials and Systems		IS 10163 (Part 1) : 1982	Recommended methods of tests for the determination of dielectric properties of insulating materials at frequencies above 300 MHZ: Part 1 general
			IS 10581 : 1983	Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids
			IS 11182 (Part 1) : 1984	Guide for the evaluation of insulation systems of electrical equipment: Part 1 identification, evaluation and ageing mechanisms
			IS 11182 (Part 2) : 1984	Guide for the evaluation of insulation systems of electrical equipment: Part 2 thermal endurance test procedures
			IS 11182 (Part 3/Sec 1) : 1986	Guide for the evaluation of insulation systems of electrical equipment: Part 3 electrical endurance test procedures: Sec 1 general considerations and evaluation procedures based on normal distributions
			IS 11182 (Part 3/Sec 2) : 1996	Guide for the evaluation of insulation systems of electrical equipment: Part 3 electrical endurance test procedures: Sec 2 evaluation procedures based on extreme - Value distributions
			IS 11182 (Part 5) : 1993	Guide for evaluation of insulation systems of electrical equipment: Part 5 mechanical endurance functional tests
			IS 11182 (Part 6) : 1986	Guide for the evaluation of insulation systems of electrical equipment: Part 6 performance evaluation based on service experience and functional tests
			IS 11182 (Part 7/Sec 1) : 1986	Guide for the evaluation of insulation systems of electrical equipment: Part 7 multi-factor functional testing: Sec 1 test procedures
			IS 11221 : 1984	Recommended test methods for determining the relative resistance of insulating materials to breakdown by surface discharges
			IS 11256 (Part 1) : 1985	Method of test for determination of thermal endurance of insulating varnishes: Part 1 electric strength method
			IS 11256 (Part 2) : 1985	Method of test for determination of thermal endurance of insulating varnishes: Part 2 measurement of loss of mass

			IS 11256 (Part 3) : 1985	Method of test for determination of thermal endurance of insulating varnishes: Part 3 bond strength by helical coil method
			IS 11731 (Part 1) : 1986	Methods of test for determination of flammability of solid electrical insulating materials when exposed to an igniting source: Part 1 horizontal specimen method
			IS 11731 (Part 2) : 1986	Methods of test for determination of flammability of solid electrical insulating materials when exposed to an igniting source: Part 2 vertical specimen method
			IS 11755 : 1986	Method of test for Determination of electrical Resistance and resistivity of Insulating materials at elevated Temperatures
			IS 11756 : 1986	Method of test for coefficients of friction of plastic film and sheeting for use as electrical insulation
			IS 1271 : 2012	Electrical insulation - Thermal evaluation and designation (Second Revision)
			IS 13508 : 1992	Test procedure for measurement of loss tangent angle of coils and bars for machine winding - Guide
			IS 14353 : 1996	Guide for determining compatibility between enamelled winding wire and impregnating compounds
			IS 14672 : 1999	Method of test for high voltage low current dry arc resistance of solid electrical insulation
			IS 15218 (Part 1) : 2002	Electrical insulating materials - Determination of the effects of ionizing radiation: Part 1 radiation interaction and dosimetry
			IS 2259 : 1963	Methods of test for determination of insulation resistance of solid insulating materials
			IS 2260 : 1973	Preconditioning, conditioning and testing of solid electrical insulating materials (First Revision)
			IS 2584 : 1963	Method of test for electric strength of solid insulating materials at power frequencies
			IS 2824 : 2007	Method for the determination of the proof and the comparative tracking indices of solid insulating materials (Second Revision)
			IS 3396 : 1979	Methods of test for volume and surface resistivity of solid electrical insulating materials (First Revision)
			IS 4486 : 1967	Recommended methods for the determination of the permittivity and dielectric dissipation factor of electrical insulating materials at power, audio and radio frequencies including metre wavelengths
			IS 8504 (Part 1) : 2012	Electrical insulating materials - Thermal endurance properties: Part 1 ageing procedures and evaluation of test results (Second Revision)
			IS 8504 (Part 2) : 2013	Electrical insulating materials - Thermal endurance properties: Part 2 determination of thermal endurance properties of electrical insulating materials - Choice of test criteria (First Revision)
			IS 8504 (Part 3) : 1994	Guide for determination of thermal endurance properties of electrical insulating materials Part 3: Statistical methods
			IS 8504 (Part 4) : 2013	Electrical insulating materials - Thermal endurance properties: Part 4 instructions for calculating thermal endurance characteristics (First Revision)
			IS 8504 (Part 5/Sec 1) : 2012	Electrical Insulating Materials -Thermal Endurance Properties -Part 5 Ageing Ovens : Section 1 Single-chamber Ovens
			IS 8504 (Part 5/Sec 2) : 2012	Electrical insulating materials - Thermal endurance properties: Part 5 ageing ovens: Sec 2 precision ovens for use up to 300°C

			IS 8504 (Part 5/Sec 3) : 2012	Electrical insulating materials - Thermal endurance properties: Part 5 ageing ovens: Sec 3 multi - Chamber ovens
			IS 8504 (Part 6) : 2012	Electrical insulating materials - Thermal endurance properties: Part 6 determination of relative thermal endurance index (RTE) of an insulating material
			IS 8504 (Part 7) : 2012	Electrical insulating materials - Thermal endurance properties: Part 7 determination of thermal endurance indices (TI And RTE) of an insulating material using the fixed time frame method
			IS 8504 (Part 8) : 2019	Electrical insulating materials - Thermal endurance properties: Part 8 instructions for calculating thermal endurance characteristics using simplified procedures
			IS 8516 : 2011	Electrical insulating materials - Determination of electrolytic corrosion caused by insulating materials - Test methods (First Revision)
			IS 9947 : 2011	Electrical insulating materials used under severe ambient conditions - Test methods for evaluating resistance to tracking and erosion (First Revision)

ANNEX 4

BIO- DATA

Name :	**KKulthe Abhaey Ashok**
Date of birth –	**12th April 1972**
Education Qualification –	**B.E. Electrical (1993) / Executive MBA (2008) from Pune University**
Present designation –	**Head – Distribution + Engineering Materials ELANTAS Beck India Limited, Pune**
Total Work Experience	**29 years in present organization**
Address for Correspondence	**E1402, Empire Square, Chinchwad, Pune 411019**
Mobile No.	**91 80071 88394**
E-Mail –	**Abhaey.kKulthe@gmail.com**
Membership of Professional Institute **–**	**Associate Member of Institution of Engineers**

Technical / Professional bodies on which represented **– Bureau of Indian Standards (ETD 02)**

Justification for nomination as ETD 02 **–**

1. **ELANTAS is a global market leader in electrical Insulating material (wire Enamels, varnishes + resins) & have the world class testing facilities in India for all the tests including thermal endurance tests & track resistance. This facility can be utilized for IEC working group for round robin tests.**
2. **I have hands on experience for various tests as per IEC 60455 + IEC 60464 + IEC 60216 for 10 years**
3. **ELANTAS supply varnishes + resins to most of OEM for motors + transformers. Interaction with the end users for the insulating materials & hence understand the market need for the same.**
4. **Looked after product development & hence understand the criticality of various insulating parameters.**
5. **ELANTAS had UL accredited laboratory for temperature Index testing in the past + I was in-charge for UL laboratory activities.**
6. **Active member in BIS for >20 years.**
7. **Presented technical papers in international seminars + published technical article in technical magazine.**
8. **I have also technical expertise for winding wires + insulation papers which can add to the testing perspective for insulation system testing + specification formation.**

Technical paper presented / published

Title	Forum	Year
Flooring for Electric Equipement Manufacturing	IEEMA Journal	2021
New Age Technology Flexible Insulating Material for Ground Insulation	ELROMA, Mumbai	2017
Impregnation technology – Green Initiative	IEEMA Journal	2012
How to measure completeness of cure	ELROMA, Mumbai	2008
Insulation system for OVDT	INSULEC, Mumbai	2005
Why oven explodes? Safety for ovens	IEEMA Journal	2003

ANNEX 5

PROGRAMME OF WORK OF ETD 02 SECTIONAL COMMITTEE

Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
1.	IS 10026 (Part 1) : 1998 IEC 60464-1 Reviewed In : 2018	Insulating varnishes containing solvents: Part 1 definitions and general requirements (First Revision)	May, 2018	-	Modified/Technically Equivalent
2.	IS 10026 (Part 2) : 1999 IEC 60464-2 Reviewed In : 2019	Insulating varnishes containing solvents: Part 2 methods of tests (First Revision)		-	Modified/Technically Equivalent
3.	IS 10026 (Part 3/Sec 1) : 1999 IEC 60464-3-1 Reviewed In : 2019	Insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 1 requirements for cold curing finishing varnishes (First Revision)		-	Modified/Technically Equivalent
4.	IS 10026 (Part 3/Sec 2) : 1999 IEC 60464-3-2 Reviewed In : 2019	Insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 2 requirements for hot curing varnishes (First Revision)	January, 2019	1	Identical under dual numbering
5.	IS 10026 (Part 3/Sec 3) : 1983 Reviewed In : 2016	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 3 air drying varnishes with temperature index 130	October, 2016	1	Indigenous
6.	IS 10026 (Part 3/Sec 4) : 1983 Reviewed In : 2016	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 4 baking varinishes with temperature index 120	October, 2016	1	Indigenous
7.	IS 10026 (Part 3/Sec 5) : 1983 Reviewed In : 2016	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 5 baking varnishes with temperature index 130	October, 2016	1	Indigenous
8.	IS 10026 (Part 3/Sec 6) : 1983 Reviewed In : 2016	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 6 baking varnishes with temperature index 155	October, 2016	1	Indigenous
9.	IS 10026 (Part 3/Sec 7) : 1983 Reviewed In : 2021	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 7 baking varnishes with temperature index 180	March, 2021	1	Indigenous
10.	IS 10026 (Part 3/Sec 8) : 1986 Reviewed In : 2018	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 8 baking varnishes with temperature index 200	April, 2018	-	Indigenous
11.	IS 10026 (Part 3/Sec 9) : 1986 Reviewed In : 2018	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 9 baking varnishes with	April, 2018	-	Indigenous

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
		temperature index 130 for magnetic core sheets			
12.	IS 10163 (Part 1) : 1982 IEC 60377-1 Reviewed In : 2018	Recommended methods of tests for the determination of dielectric properties of insulating materials at frequencies above 300 MHZ: Part 1 general	April, 2018	-	Modified/Technically Equivalent
13.	IS 10192 : 1982 Reviewed In : 2020	Specification for synthetic resin bonded glass fibre (SRBGF) for electrical purposes	October, 2020	1	Modified/Technically Equivalent
14.	IS 10333 : 1982 Reviewed In : 2018	Specification for epoxy resin systems for cast resin insulated power and control cable joints and terminations up to and including 11 kV	April, 2018	-	Indigenous
15.	IS 10581 : 1983 IEC 60589 Reviewed In : 2020	Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids	October, 2020	-	Modified/Technically Equivalent
16.	IS 11182 (Part 1) : 1984 IEC 60611 Reviewed In : 2021	Guide for the evaluation of insulation systems of electrical equipment: Part 1 identification, evaluation and ageing mechanisms	March, 2021	-	Modified/Technically Equivalent
17.	IS 11182 (Part 2) : 1984 IEC 60611 Reviewed In : 2021	Guide for the evaluation of insulation systems of electrical equipment: Part 2 thermal endurance test procedures	March, 2021	-	Modified/Technically Equivalent
18.	IS 11182 (Part 3/Sec 1) : 1986 IEC 60727-1 Reviewed In : 2021	Guide for the evaluation of insulation systems of electrical equipment: Part 3 electrical endurance test procedures: Sec 1 general considerations and evaluation procedures based on normal distributions	March, 2021	-	Modified/Technically Equivalent
19.	IS 11182 (Part 3/Sec 2) : 1996 IEC 60727-3 Reviewed In : 2021	Guide for the evaluation of insulation systems of electrical equipment: Part 3 electrical endurance test procedures: Sec 2 evaluation procedures based on extreme - Value distributions	March, 2021	-	Identical under dual numbering
20.	IS 11182 (Part 5) : 1993 IEC 941 Reviewed In : 2019	Guide for evaluation of insulation systems of electrical equipment: Part 5 mechanical endurance functional tests		-	Identical under dual numbering
21.	IS 11182 (Part 6) : 1986 Reviewed In : 2021	Guide for the evaluation of insulation systems of electrical equipment: Part 6 performance evaluation based on service experience and functional tests	March, 2021	-	Modified/Technically Equivalent
22.	IS 11182 (Part 7/Sec 1) : 1986 Reviewed In : 2021	Guide for the evaluation of insulation systems of electrical equipment: Part 7 multi-factor functional testing: Sec 1 test procedures	March, 2021	-	Modified/Technically Equivalent
23.	IS 11221 : 1984 IEC 60343 Reviewed In : 2021	Recommended test methods for determining the relative resistance of	April, 2021	-	Modified/Technically Equivalent

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PROGRAMME OF WORK OF ETD 02 SECTIONAL COMMITTEE

Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
		insulating materials to breakdown by surface discharges			
24.	IS 11256 (Part 1) : 1985 IEC 60370 Reviewed In : 2016	Method of test for determination of thermal endurance of insulating varnishes: Part 1 electric strength method	October, 2016	-	Modified/Technically Equivalent
25.	IS 11256 (Part 2) : 1985 Reviewed In : 2021	Method of test for determination of thermal endurance of insulating varnishes: Part 2 measurement of loss of mass	April, 2021	-	Modified/Technically Equivalent
26.	IS 11256 (Part 3) : 1985 IEC 60290 Reviewed In : 2021	Method of test for determination of thermal endurance of insulating varnishes: Part 3 bond strength by helical coil method	April, 2021	-	Modified/Technically Equivalent
27.	IS 11297 (Part 1) : 1985 Reviewed In : 2021	Specification for varnished fabrics for electrical purposes: Part 1 definitions and general requirements	March, 2021	1	Modified/Technically Equivalent
28.	IS 11297 (Part 2) : 1988 Reviewed In : 2020	Specification for varnished fabrics for electrical purposes: Part 2 methods of tests	October, 2020	-	Modified/Technically Equivalent
29.	IS 11297 (Part 3/Sec 1) : 1988 Reviewed In : 2020	Specification for varnished fabrics for electrical purposes: Part 3 specifications for individual materials: Sec 1 glass fabric backed varnished fabrics	October, 2020	-	Modified/Technically Equivalent
30.	IS 11298 (Part 1) : 1985 IEC 60674-1 Reviewed In : 2021	Specification for plastic films for electrical purposes: Part 1 definitions and general requirements	March, 2021	-	Identical under dual numbering
31.	IS 11298 (Part 2) : 2024 IEC 60674-2:2016	Plastic Films for Electrical Purposes ï¿½ Specification Part 2 Methods of Test (Second Revision)		-	Identical under dual numbering
32.	IS 11298 (Part 3/Sec 1) : 1991 Reviewed In : 2020	Plastic films for electrical purposes - Specification: Part 3 specifications for individual materials: Sec 1 polypropylene films for capacitors (First Revision)	October, 2020	-	Modified/Technically Equivalent
33.	IS 11298 (Part 3/Sec 2) : 1990 Reviewed In : 2019	Plastic films for electrical purposes - Specification: Part 3 specifications for individual materials: Sec 2 metallized polypropylene films		1	Indigenous
34.	IS 11298 (Part 3/Sec 3) : 2024 IEC 60674-3-2:2019	Plastic Films for Electrical Purposes ï¿½ Specification Part 3 Individual Materials ï¿½ Specifications Section 3 Balanced Biaxial Oriented Polyethylene Terephthalate (PET) Films Used For Electrical Insulation ï¿½ Requirements (First Revision)		-	Identical under dual numbering
35.	IS 11298 (Part 3/Sec 4) : 1998 IEC 674-3-3 Reviewed In : 2018	Plastic films for electrical purposes: Part 3 specifications for individual materials: Sec 4 requirements for	July, 2018	-	Identical under dual numbering

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PROGRAMME OF WORK OF ETD 02 SECTIONAL COMMITTEE

Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
		polycarbonate (PC) films used for electrical insulation			
36.	IS 11298 (Part 3/Sec 8) : 1998 IEC 674-3-7 Reviewed In : 2018	Plastic films for electrical purposes: Part 3 specifications for individual materials: Sec 8 requirements for fluoroethylene - Propylene (FEP) films used for electrical insulation	July, 2018	-	Identical under dual numbering
37.	IS 11298 (Part 3/Sec 57) : 2024 IEC 60674-3-4:2022	Plastic Films for Electrical Purposes Part 3 individual materials ï¿½ Specifications Sections 5 to 7 Requirements for Polyimide Films Used for Electrical Insulation (First Revision)		-	Identical under dual numbering
38.	IS 11654 (Part 1) : 2024 IEC 60667-1:2020	Flexible Insulating Sleeving Part 1 Definitions and General Requirements (First Revision)		-	Identical under dual numbering
39.	IS 11654 (Part 2) : 2024 IEC 60684-2:2011	Flexible Insulating Sleeving Part 2 Methods of Test (First Revision)		-	Identical under dual numbering
40.	IS 11654 (Part 3/Sec 1) : 1988 Reviewed In : 2020	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 1 general purpose grade sleeving with temperature index 90	October, 2020	-	Modified/Technically Equivalent
41.	IS 11654 (Part 3/Sec 103) : 1989 Reviewed In : 2020	Specification for flexible insulating sleevings: Part 3 specifications for individual types of sleevings: Sec 103 general purpose - Grade sleeving with unilateral tolerances with temperature index 90	October, 2020	-	Modified/Technically Equivalent
42.	IS 11654 (Part 3/Sec 403) : 1989 Reviewed In : 2020	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 403 glass textile sleeving with acrylic based coating - High breakdown strength	October, 2020	1	Modified/Technically Equivalent
43.	IS 11654 (Part 3/Sec 404) : 1989 Reviewed In : 2020	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 404 glass textile sleeving with acrylic based coating - Medium breakdown strength	October, 2020	-	Modified/Technically Equivalent
44.	IS 11654 (Part 3/Sec 405) : 1989 Reviewed In : 2020	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 405 glass textile sleeving with acrylic based coating - Lower breakdown strength	October, 2020	-	Modified/Technically Equivalent
45.	IS 11654 (Part 3/Sec 406) : 1989 Reviewed In : 2020	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 406	October, 2020	1	Modified/Technically Equivalent

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
		glass textile sleeving with pvc based coating - High breakdown strength			
46.	IS 11654 (Part 3/Sec 407) : 1989 Reviewed In : 2020	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 407 glass textile sleeving with pvc based coating - Medium breakdown strength	October, 2020	-	Modified/Technically Equivalent
47.	IS 11654 (Part 3/Sec 408) : 1989 Reviewed In : 2020	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 408 glass textile sleeving with pvc based coating - Lower breakdown strength	October, 2020	-	Modified/Technically Equivalent
48.	IS 11731 (Part 1) : 1986 IEC 60107 Reviewed In : 2021	Methods of test for determination of flammability of solid electrical insulating materials when exposed to an igniting source: Part 1 horizontal specimen method	April, 2021	-	Identical under dual numbering
49.	IS 11731 (Part 2) : 1986 IEC 60707 Reviewed In : 2021	Methods of test for determination of flammability of solid electrical insulating materials when exposed to an igniting source: Part 2 vertical specimen method	April, 2021	-	Modified/Technically Equivalent
50.	IS 1175 : 1981 ISO 67 Reviewed In : 2016	Methods for grading and classification of muscovite mica blocks, thins and films (First Revision)	October, 2016	-	Indigenous
51.	IS 11755 : 1986 IEC 60345 Reviewed In : 2021	Method of test for Determination of electrical Resistance and resistivity of Insulating materials at elevated Temperatures	April, 2021	-	Modified/Technically Equivalent
52.	IS 11756 : 1986 IEC 60648 Reviewed In : 2016	Method of test for coefficients of friction of plastic film and sheeting for use as electrical insulation	October, 2016	1	Modified/Technically Equivalent
53.	IS 12316 (Part 1) : 1988 Reviewed In : 2020	Specification for non - Cellulosic papers for electrical purposes: Part 1 definitions and general requirements	October, 2020	-	Modified/Technically Equivalent
54.	IS 12316 (Part 2) : 1988 Reviewed In : 2020	Specification for non - Cellulosic papers for electrical purposes: Part 2 methods of test	October, 2020	-	Indigenous
55.	IS 12316 (Part 3/Sec 1) : 1988 Reviewed In : 2020	Specification for non - Cellulosic papers for electrical purposes: Part 3 requirements for individual materials: Sec 1 unfilled aramid (Aromatic Polyamide) papers calendered	October, 2020	-	Modified/Technically Equivalent
56.	IS 12316 (Part 3/Sec 2) : 1988 Reviewed In : 2020	Specification for non-cellulosic papers for electrical purposes: Part 3 requirements for individual materials: Sec 2 unfilled aramid (Aromatic Polyamide) paper, uncalendered	October, 2020	-	Modified/Technically Equivalent
57.	IS 12317 (Part 1) : 1988 IEC 60672-1 Reviewed In : 2020	Specification for ceramic and glass insulating materials for telecommunication and allied purposes: Part 1 general requirements	October, 2020	-	Modified/Technically Equivalent

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
		and classification of ceramic and glass insulating materials			
58.	IS 1271 : 2012 IEC 60085 Reviewed In : 2024	Electrical insulation - Thermal evaluation and designation (Second Revision)	September, 2024	-	Identical under dual numbering
59.	IS 12747 (Part 1) : 2011 IEC 60626-1 : 2009 Reviewed In : 2016	Combined flexible materials for electrical insulation: Part 1 definitions and general requirements (First Revision)	August, 2016	-	Identical under dual numbering
60.	IS 12747 (Part 2) : 2012 EC 60626-2 : 2009 Reviewed In : 2024	Combined flexible materials for electrical insulation: Part 2 methods of test (First Revision)	November, 2024	-	Identical under dual numbering
61.	IS 12747 (Part 3) : 2015 IEC 60626-3 : 2008 Reviewed In : 2021	Combined flexible materials for electrical insulation: Part 3 specifications for individual materials (First Revision)	April, 2021	-	Identical under dual numbering
62.	IS 13066 : 1991 Reviewed In : 2016	Prepreg based on glass woven fabric for electrical applications - Specification	October, 2016	-	Indigenous
63.	IS 13335 : 1992 Reviewed In : 2018	Muscovite mica scrap for mica paper - Specification	April, 2018	-	Indigenous
64.	IS 13357 : 1992 Reviewed In : 2018	Methods of grading and visual classification of muscovite mica splittings	April, 2018	-	Modified/Technically Equivalent
65.	IS 13465 (Part 1) : 2005 IEC 60455-1 Reviewed In : 2020	Resin based reactive compounds used for electrical insulation: Part 1 definitions and general requirements (First Revision)	April, 2020	-	Identical under dual numbering
66.	IS 13465 (Part 2) : 2005 IEC 60455-2 Reviewed In : 2020	Resin based reactive compounds used for electrical insulation: Part 2 methods of test (First Revision)	September, 2020	-	Identical under dual numbering
67.	IS 13465 (Part 3/Sec 1) : 2006 IEC 60455-3-1 Reviewed In : 2024	Resin based reactive compounds used for electrical insulation: Part 3 specifications for individual materials: Sec 1 unfilled epoxy resinous compounds (First Revision)	September, 2024	-	Identical under dual numbering
68.	IS 13465 (Part 3/Sec 2) : 2006 IEC 60455-3-2 Reviewed In : 2024	Resin based reactive compounds used for electrical insulation: Part 3 specifications for individual materials: Sec 2 quartz filled epoxy resinous compounds (First Revision)	September, 2024	-	Identical under dual numbering
69.	IS 13465 (Part 3/Sec 3) : 2006 IEC 60455-3-3 Reviewed In : 2024	Resin based reactive compounds used for electrical insulation: Part 3 specifications for individual materials: Sec 3 unfilled polyurethane compounds (First Revision)	September, 2024	-	Identical under dual numbering
70.	IS 13465 (Part 3/Sec 4) : 2006 IEC 60455-3-4 Reviewed In : 2024	Resin based reactive compounds used for electrical insulation: Part 3 specifications for - Individual	September, 2024	-	Identical under dual numbering

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
		materials: Sec 4 filled polyurethane compounds (First Revision)			
71.	IS 13465 (Part 3/Sec 5) : 1998 Reviewed In : 2018	Solventless polymerisable resinous compounds used for electrical insulation - Specification: Part 3 specifications for individual materials: Sec 5 epoxy phenol novolac resin	May, 2018	-	Indigenous
72.	IS 13465 (Part 3/Sec 6) : 2006 IEC 60455 -3 - 5 Reviewed In : 2021	Resin based reactive compounds used for electrical insulation 2006: Part 3 specifications for individual materials: Sec 6 unsaturated polyester based impregnating resins	March, 2021	-	Identical under dual numbering
73.	IS 13508 : 1992 IEC 60894 Reviewed In : 2018	Test procedure for measurement of loss tangent angle of coils and bars for machine winding - Guide	February, 2018	1	Identical under dual numbering
74.	IS 13884 : 1993 Reviewed In : 2018	Muscovite mica flakes and mica powder for industrial applications	April, 2018	-	Indigenous
75.	IS 14353 : 1996 Reviewed In : 2021	Guide for determining compatibility between enamelled winding wire and impregnating compounds	March, 2021	-	Indigenous
76.	IS 14672 : 1999 Reviewed In : 2019	Method of test for high voltage low current dry arc resistance of solid electrical insulation	March, 2019	-	Indigenous
77.	IS 15208 : 2002 Reviewed In : 2022	Unidirectional non - Woven semi - Cured glass fibre tape - Specification	September, 2022	-	Indigenous
78.	IS 15218 (Part 1) : 2002 IEC 60544-1 : 1994 Reviewed In : 2022	Electrical insulating materials - Determination of the effects of ionizing radiation: Part 1 radiation interaction and dosimetry	October, 2022	-	Identical under dual numbering
79.	IS 15652 : 2006 IEC 61111 Reviewed In : 2016	Insulating mats for electrical purposes - Specification	April, 2016	2	Identical under dual numbering
80.	IS 1576 : 1992 Reviewed In : 2018	Solid pressboard for electrical purposes - Specification (First Revision)	April, 2018	2	Indigenous
81.	IS 16498 (Part : Part) : 2017 IEC 60641-2 : 2004	Specification for Pressboard and Presspaper for Electrical Purposes Part 2 Methods of Tests		-	Identical under dual numbering
82.	IS 16498 (Part 1) : 2018 IEC 60641-1 : 2007 Reviewed In : 2024	Specification for Pressboard and Presspaper for Electrical Purposes Part 1 Definitions and General Requirements	November, 2024	-	Identical under dual numbering
83.	IS 16498 (Part 3/Sec 1) : 2019 IEC 60641-3-1 : 2008 Reviewed In : 2024	Specification for Pressboard and Presspaper for Electrical Purposes Part 3 Specifications for Individual Materials Sheet 1 Requirements for pressboard, types B.0.1, B.0.3, B.2.1, B.2.3, B.3.1, B.3.3, B.4.1, B.4.3, B.5.1, B.5.3 and B.6.1	November, 2024	-	Identical under dual numbering
84.	IS 16498 (Part 3/Sec 2) : 2019	Specification for Pressboard and Presspaper for Electrical Purposes Part 3 Specifications for Individual	November, 2024	-	Identical under dual numbering

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
	60641-3-2 : 2007 Reviewed In : 2024	Materials Sheet 2 : Requirements for Presspaper, Types P.2.1, P.4.1, P.4.2, P.4.3 and P.6.1			
85.	IS 16499 (Part 1) : 2017 IEC 60763-1 : 2010	Laminated Pressboard for Electrical Purposes Part 1 Definitions, Classification and General Requirements		-	Identical under dual numbering
86.	IS 16499 (Part 3/Sec 1) : 2019 IEC 60763-31 : 2010 Reviewed In : 2024	Laminated Pressboard for Electrical Purposes Part 3 Specifications for Individual Materials — Sheet 1 : Requirements for Laminated Pre Compressed Pressboard, Types LB3.1A.1, and LB3.1A.2	November, 2024	-	Identical under dual numbering
87.	IS 2259 : 1963 Reviewed In : 2020	Methods of test for determination of insulation resistance of solid insulating materials	October, 2020	1	Modified/Technically Equivalent
88.	IS 2260 : 1973 Reviewed In : 2018	Preconditioning, conditioning and testing of solid electrical insulating materials (First Revision)	April, 2018	-	Modified/Technically Equivalent
89.	IS 2448 (Part 1) : 1963 Reviewed In : 2020	Specification for adhesive insucating tapes for electrical purposes: Part 1 tapes with cotton textile substrates	October, 2020	5	Modified/Technically Equivalent
90.	IS 2464 : 1963 Reviewed In : 2018	Specification for built-up mica for electrical purposes	April, 2018	1	Modified/Technically Equivalent
91.	IS 2584 : 1963 Reviewed In : 2021	Method of test for electric strength of solid insulating materials at power frequencies	September, 2021	1	Modified/Technically Equivalent
92.	IS 2824 : 2007 IEC 60112 : 2003 Reviewed In : 2017	Method for the determination of the proof and the comparative tracking indices of solid insulating materials (Second Revision)	November, 2017	-	Identical under dual numbering
93.	IS 3396 : 1979 Reviewed In : 2021	Methods of test for volume and surface resistivity of solid electrical insulating materials (First Revision)	March, 2021	-	Modified/Technically Equivalent
94.	IS 4248 : 1967 Reviewed In : 2018	Specification for non - Ignitable and self - Extinguishing boards (With Mineral Base) for electrical purposes	April, 2018	-	Modified/Technically Equivalent
95.	IS 4249 : 1967 Reviewed In : 2018	Classification and methods of tests for non - Ignitable and self - Extinguishing properties of solid electrical insulating materials	April, 2018	1	Modified/Technically Equivalent
96.	IS 4486 : 1967 Reviewed In : 2018	Recommended methods for the determination of the permittivity and dielectric dissipation factor of electrical insulating materials at power, audio and radio frequencies including metre wavelengths	April, 2018	-	Modified/Technically Equivalent
97.	IS 5596 : 1970 Reviewed In : 2020	Methods of test for determining deleterious substances in fibrous insulating materials	October, 2020	-	Modified/Technically Equivalent
98.	IS 5711 : 1970 Reviewed In : 2018	Specification for vulcanized fibre rods and tubes for electrical purposes	April, 2018	-	Modified/Technically Equivalent

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
99.	IS/IEC 60371-1 : 2003 Reviewed In : 2024	Specification for insulating materials based on MICA: Part 1 definitions and general requirements	November, 2024	-	Identical under single numbering
100.	IS/IEC 60371-2 : 2004 IEC 60371-2 : 2004 Reviewed In : 2024	Specification for insulating materials based on MICA: Part 2 methods of test	November, 2024	-	Identical under single numbering
101.	IS/IEC 60371-3-1 : 2006 Reviewed In : 2024	Specification for insulating materials based on mica, Part 3 Specification for individual materials, Section 1 Commutator Separators and materials	September, 2024	-	Identical under single numbering
102.	IS/IEC 60371-3-2 : 2005 Reviewed In : 2024	Specification for Insulating Materials Based on MICA, Part 3 Specification for Individual Materials Section 2 Mica Paper	September, 2024	-	Identical under single numbering
103.	IS/IEC 60371-3-3 : 1983 IEC 60371-3-3 ; 1983 Reviewed In : 2021	Specification for Insulating Materials Based on MICA, Part 3 Specification for Individual Materials Section 3 Specification for Rigid Mica Materials for Heating Equipment	August, 2021	-	Identical under single numbering
104.	IS/IEC 60371-3-4 : 1992 IEC 60371 : Part 3 : Sec 4 Reviewed In : 2021	Specification for insulating materials based on MICA, Part 3 Specifications for individual materials Section 4 Polyester film-backed mica paper with a B-stage epoxy resin binder	August, 2021	-	Identical under single numbering
105.	IS/IEC 60371-3-5 : 2005 IEC 60371-3-5 : 2005 Reviewed In : 2022	Specification for Insulating Materials Based on MICA, Part 3 Specification for Individual Materials, Section 5 Glass-Backed Mica Paper with an Epoxy Resin Binder for Post Impregnation (VPI)	March, 2022	-	Identical under single numbering
106.	IS/IEC 60371-3-6 : 1992 IEC 60371 : Part 3 : Sec 6 : 199 Reviewed In : 2022	Specification for Insulating Materials based on MICA, Part 3 Specifications for Individual Materials, Section 6 Glass backed Mica Paper with a B-stage Epoxy Resin Binder	March, 2022	-	Identical under single numbering
107.	IS/IEC 60371-3-7 : 1995 IEC 60371_3_7:1995 Reviewed In : 2022	Specification for Insulating Materials Based on MICA Part 3 Specification for Individual Materials Section 7 Polyester Film Mica Paper with an Epoxy Resin Binder for Single Conductor Taping	March, 2022	-	Identical under single numbering
108.	IS/IEC 60371-3-8 : 1995 IEC 60371 : Part 3 :Sec 8 : 1995 Reviewed In : 2022	Specification for Insulating Materials Based on MICA Part 3 Specification for Individual Materials Section 8 Mica Paper Tapes for Flame Resistant Security Cables	April, 2022	-	Identical under single numbering
109.	IS/IEC 60371_3_9 : 1995 IEC 60371-3-9 : 1995 Reviewed In : 2022	Specification for Insulating Materials Based on MICA Part 3 Specification for Individual Materials Section 9 Moulding Micanite	May, 2022	-	Identical under single numbering

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
110.	IS/IEC 60667-1 : 2020 IEC 60667-1:2020	Vulcanized fibre for Electrical Purposes Part 1 Definitions and General Requirements		-	Identical under single numbering
111.	IS/IEC 60667-2 : 2020 IEC 60667-2:2020	Vulcanized fibre for electrical purposes Part 2 Methods of test		-	Identical under single numbering
112.	IS/IEC 60667-3-1) : 2020 IEC 60667-3-1:2020	Vulcanized Fibre for Electrical Purposes Part 3 Individual Materials ï¿½ Specifications Section 1 Flat Sheets		-	Identical under single numbering
113.	IS 6230 : 1970 Reviewed In : 2018	Specification for woven asbestos tape for electrical insulating purposes	April, 2018	-	Modified/Technically Equivalent
114.	IS 6659 : 1976 Reviewed In : 2021	Electronic Grade Ceramic Materials	April, 2021	-	Indigenous
115.	IS 7084 : 1973 Reviewed In : 2018	Specification for bitumen - Based filling compounds for electrical purposes	March, 2018	1	Modified/Technically Equivalent
116.	IS 7571 : 1974 Reviewed In : 2020	Methods of tests for ceramics for telecommunication and allied purposes	October, 2020	-	Modified/Technically Equivalent
117.	IS 7755 : 1975 Reviewed In : 2018	Specification for high tension insulating cotton tape impregnated with bitumen - Based compound	April, 2018	-	Indigenous
118.	IS 7809 (Part 1) : 1975 IEC 60454-1 Reviewed In : 2023	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 1 general requirements	January, 2023	2	Modified/Technically Equivalent
119.	IS 7809 (Part 2) : 1977 IEC 60454-2 Reviewed In : 2021	Specification for pressure sensitive adhesive tapes for electrical purpose : Part 2 methods of test	April, 2021	1	Indigenous
120.	IS 7809 (Part 3/Sec 1) : 1986 IEC 60454-2 Reviewed In : 2016	Specification for pressure sensitive adhesive insulating tapes for electrical purposes: Part 3 requirements or individual materials: Sec 1 plasticized polyvinylchloride tapes with non - Thermosetting adhesive (First Revision)	October, 2016	2	Modified/Technically Equivalent
121.	IS 7809 (Part 3/Sec 2) : 1981 Reviewed In : 2021	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 Specifications for individual materials: Sec 2 Polyester film tapes (PETP) with thermosetting adhesive	April, 2021	-	Modified/Technically Equivalent
122.	IS 7809 (Part 3/Sec 3) : 1981 Reviewed In : 2021	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specification for individual materials: Sec 3 polyster film tapes (PETP) with non - Thermosetting adhesive	April, 2021	-	Modified/Technically Equivalent
123.	IS 7809 (Part 3/Sec 4) : 1977 Reviewed In : 2018	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specifications for individual	April, 2018	-	Modified/Technically Equivalent

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
		materials: Sec 4 cellulosic paper, creped with thermosetting adhesive			
124.	IS 7809 (Part 3/Sec 5) : 1977 Reviewed In : 2021	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specifications for individual materials: Sec 5 cellulosic paper with thermosetting adhesive	April, 2021	-	Modified/Technically Equivalent
125.	IS 8504 (Part 1) : 2012 IEC 60216-1:2001 Reviewed In : 2017	Electrical insulating materials - Thermal endurance properties: Part 1 ageing procedures and evaluation of test results (Second Revision)		-	Identical under dual numbering
126.	IS 8504 (Part 2) : 2013 IEC 60216 - 2 : 2005 Reviewed In : 2023	Electrical insulating materials - Thermal endurance properties: Part 2 determination of thermal endurance properties of electrical insulating materials - Choice of test criteria (First Revision)	January, 2023	-	Identical under dual numbering
127.	IS 8504 (Part 3) : 1994 IEC 60216-3 Reviewed In : 2019	Guide for determination of thermal endurance properties of electrical insulating materials Part 3: Statistical methods		-	Identical under dual numbering
128.	IS 8504 (Part 4) : 2013 IEC 60216 - 3 : 2006 Reviewed In : 2023	Electrical insulating materials - Thermal endurance properties: Part 4 instructions for calculating thermal endurance characteristics (First Revision)	January, 2023	-	Identical under dual numbering
129.	IS 8504 (Part 5/Sec 1) : 2012 IEC 60216_4_1:2006 Reviewed In : 2024	Electrical Insulating Materials - Thermal Endurance Properties -Part 5 Ageing Ovens : Section 1 Single-chamber Ovens	September, 2024	-	Identical under dual numbering
130.	IS 8504 (Part 5/Sec 2) : 2012 IEC 60216_4_2:2000 Reviewed In : 2024	Electrical insulating materials - Thermal endurance properties: Part 5 ageing ovens: Sec 2 precision ovens for use up to 300°C	September, 2024	-	Identical under dual numbering
131.	IS 8504 (Part 5/Sec 3) : 2012 IEC 60216_4_3:2000 Reviewed In : 2024	Electrical insulating materials - Thermal endurance properties: Part 5 ageing ovens: Sec 3 multi - Chamber ovens	September, 2024	-	Identical under dual numbering
132.	IS 8504 (Part 6) : 2012 IEC 60216_5:2008 Reviewed In : 2017	Electrical insulating materials - Thermal endurance properties: Part 6 determination of relative thermal endurance index (RTE) of an insulating material		-	Identical under dual numbering
133.	IS 8504 (Part 7) : 2012 IEC 60216_6:2006 Reviewed In : 2017	Electrical insulating materials - Thermal endurance properties: Part 7 determination of thermal endurance indices (TI And RTE) of an insulating material using the fixed time frame method		-	Identical under dual numbering
134.	IS 8504 (Part 8) : 2019	Electrical insulating materials - Thermal endurance properties: Part 8 instructions for calculating thermal	November, 2024	-	Identical under dual numbering

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
	IEC 60216-8 : 2013 Reviewed In : 2024	endurance characteristics using simplified procedures			
135.	IS 8516 : 2011 IEC 60426 : 2007 Reviewed In : 2024	Electrical insulating materials - Determination of electrolytic corrosion caused by insulating materials - Test methods (First Revision)	November, 2024	-	Identical under dual numbering
136.	IS 8570 : 1977 Reviewed In : 2021	Specification for presspaper for electrical purposes	September, 2021	-	Modified/Technically Equivalent
137.	IS 9043 : 1979 ISO 444 Reviewed In : 2021	Method for grading (By Size) of phlogopite mica blocks, thins and splittings	September, 2021	-	Modified/Technically Equivalent
138.	IS 9044 : 1979 ISO 5972 Reviewed In : 2016	Method of measuring thickness of mica blocks, thins, films and splittings	October, 2016	-	Modified/Technically Equivalent
139.	IS 9045 : 1979 ISO 5023 Reviewed In : 2016	Thermal classification of phlogopite mica splittings	October, 2016	-	Modified/Technically Equivalent
140.	IS 9335 (Part 1) : 2024	Cellulosic Papers for Electrical Purposes â€"Specification Part 1 Definitions and General Requirements (First Revision)		-	Modified/Technically Equivalent
141.	IS 9335 (Part 2) : 2024 IEC 60554-2:2001	Cellulosic Papers for Electrical Purposes Part 2 Methods of Test (Second Revision)		-	Identical under dual numbering
142.	IS 9335 (Part 3/Sec 1) : 1984 IEC 554-3-1 Reviewed In : 2021	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 1 general purpose electrical paper	April, 2021	1	Modified/Technically Equivalent
143.	IS 9335 (Part 3/Sec 2) : 1985 EC Pub 554-3-2 Reviewed In : 2021	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 2 capacitor paper	April, 2021	-	Modified/Technically Equivalent
144.	IS 9335 (Part 3/Sec 3) : 1984 IEC 554-3-3 Reviewed In : 2021	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 3 crepe paper	April, 2021	-	Modified/Technically Equivalent
145.	IS 9335 (Part 3/Sec 4) : 1984 IEC 554-3-4 Reviewed In : 2021	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 4 electrolytic capacitor paper	April, 2021	-	Modified/Technically Equivalent
146.	IS 9335 (Part 3/Sec 5) : 1985 IEC 554-3-5 Reviewed In : 2021	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 5 special papers	April, 2021	1	Modified/Technically Equivalent
147.	IS 9455 : 1980 Reviewed In : 2016	Classification of muscovite mica blocks, thins and films based on electrical properties	October, 2016	1	Modified/Technically Equivalent
148.	IS 9502 : 1980 Reviewed In : 2016	Specification for muscovite mica components for electronic equipment	October, 2016	-	Modified/Technically Equivalent

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Sl. No.	IS No.	Title	Reaffirmation Details	No. of Amendments	Degree of Equivalence
149.	IS 9947 : 2011 IEC 60587 : 2007 Reviewed In : 2016	Electrical insulating materials used under severe ambient conditions - Test methods for evaluating resistance to tracking and erosion (First Revision)	August, 2016	-	Identical under dual numbering

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LIST OF INDIAN STANDARDS DUE FOR REVIEW

Sl. No	IS No.	Title of Indian Standard	Degree of Equivalence
1	IS 10026 : Part 3 : Sec 1 : 1999/IEC 60464-3-1:1986	Insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 1 requirements for cold curing finishing varnishes (First Revision)	Modified/Technically Equivalent
2	IS 10026 : Part 3 : Sec 2 : 1999/IEC 60464-3-2:1989	Insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 2 requirements for hot curing varnishes (First Revision)	Modified/Technically Equivalent
3	IS 10026 : Part 2 : 1999/IEC 60464-2:1974	Insulating varnishes containing solvents: Part 2 methods of tests (First Revision)	Modified/Technically Equivalent
4	IS 11182 : Part 3 : Sec 2 : 1996/IEC TS 60727-2:1993	Guide for the evaluation of insulation systems of electrical equipment: Part 3 electrical endurance test procedures: Sec 2 evaluation procedures based on extreme - Value distributions	Modified/Technically Equivalent
5	IS 11731 : Part 1 : 1986/IEC 60707: 1981	Methods of test for determination of flammability of solid electrical insulating materials when exposed to an igniting source: Part 1 horizontal specimen method	Modified/Technically Equivalent
6	IS 13508 : 1992/IEC 60894: 1987	Test procedure for measurement of loss tangent angle of coils and bars for machine winding - Guide	Modified/Technically Equivalent
7	IS 7809 : Part 1 : 1975/IEC 60454-1:1974	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 1 general requirements	Modified/Technically Equivalent
8	IS 7809 : Part 2 : 1977/IEC 60454-2:1974	Specification for pressure sensitive adhesive tapes for electrical purpose : Part 2 methods of test	Indigenous
9	IS 7809 : Part 3 : Sec 1 : 1986/IEC 60454-3-1:1976	Specification for pressure sensitive adhesive insulating tapes for electrical purposes: Part 3 requirements or individual materials: Sec 1 plasticized polyvinylchloride tapes with non - Thermosetting adhesive (First Revision)	Modified/Technically Equivalent
10	IS 7809 : Part 3 : Sec 2 : 1981/IEC 60454-3-2:1981	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 Specifications for individual materials: Sec 2 Polyester film tapes (PETP) with thermosetting adhesive	Modified/Technically Equivalent
11	IS 7809 : Part 3 : Sec 3 : 1981/IEC 60454-3-3:1981	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specification for individual materials: Sec 3 polyster film tapes (PETP) with non - Thermosetting adhesive	Modified/Technically Equivalent
12	IS 7809 : Part 3 : Sec 4 : 1977/IEC 60454-3-4 (draft)	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specifications for individual materials: Sec 4 cellulosic paper, creped with thermosetting adhesive	Modified/Technically Equivalent
13	IS 7809 : Part 3 : Sec 5 : 1977/IEC 60454-3-5 (draft)	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specifications for individual materials: Sec 5 cellulosic paper with thermosetting adhesive	Modified/Technically Equivalent
14	IS 8570 : 1977/BS 3255:1975	Specification for presspaper for electrical purposes	Modified/Technically Equivalent
15	IS 9335 : Part 3 : Sec 1 : 1984/IEC 60554-3-1: 1979	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 1 general purpose electrical paper	Modified/Technically Equivalent

16	IS 9335 : Part 3 : Sec 3 : 1984/IEC 60554-3-3: 1980	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 3 crepe paper	Modified/Technically Equivalent
17	IS 9335 : Part 3 : Sec 4 : 1984/IEC 60554-3-4:1979	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 4 electrolytic capacitor paper	Modified/Technically Equivalent
18	IS 9335 : Part 3 : Sec 5 : 1985/IEC 60554-3-5:1984	Specification for cellulosic papers for electrical purposes: Part 3 specifications for individual materials: Sec 5 special papers	Modified/Technically Equivalent
19	IS 8504 : Part 4 : 2013/IEC 60216-3:2006-2021	Electrical insulating materials - Thermal endurance properties: Part 4 instructions for calculating thermal endurance characteristics (First Revision)	Identical under dual numbering
20	IS 8504 : PART 6 : 2012/IEC 60216-5:2008-2022	Electrical insulating materials - Thermal endurance properties: Part 6 determination of relative thermal endurance index (RTE) of an insulating material	Identical under dual numbering
21	IS 8504 : PART 7 : 2012/IEC 60216-6:2006-2022	Electrical insulating materials - Thermal endurance properties: Part 7 determination of thermal endurance indices (TI And RTE) of an insulating material using the fixed time frame method	Identical under dual numbering
22	IS 12747 : Part 1 : 2011/IEC 60626-1:2009-2023	Combined flexible materials for electrical insulation:Part 1 definitions and general requirements (First Revision)	Identical under dual numbering
23	IS 13465 : Part 2 : 2005/IEC 60455-2:1998-2023	Resin based reactive compounds used for electrical insulation: Part 2 methods of test (First Revision)	Identical under dual numbering
24	IS 13465 : Part 3 : Sec 6 : 2006/IEC 60455-3-5:2001-2006	Resin based reactive compounds used for electrical insulation 2006: Part 3 specifications for individual materials: Sec 6 unsaturated polyester based impregnating resins	Identical under dual numbering
25	IS 15218 : Part 1 : 2002/IEC 60544-1:1994-2013	Electrical insulating materials - Determination of the effects of ionizing radiation: Part 1 radiation interaction and dosimetry	Identical under dual numbering
26	IS 15652 : 2006/IEC 61111: 1992	Insulating mats for electrical purposes - Specification	Modified/Technically Equivalent
27	IS 2824 : 2007/IEC 60112:2003-2020	Method for the determination of the proof and the comparative tracking indices of solid insulating materials (Second Revision)	Identical under dual numbering
28	IS 8504 : Part 1 : 2012/IEC 60216-1:2001-2013	Electrical insulating materials - Thermal endurance properties: Part 1 ageing procedures and evaluation of test results (Second Revision)	Identical under dual numbering
29	IS 9947 : 2011/IEC 60587:2007-2022	Electrical insulating materials used under severe ambient conditions - Test methods for evaluating resistance to tracking and erosion (First Revision)	Identical under dual numbering
30	IS 8504 : PART 5 : SEC 1 : 2012/IEC 60216-4-1:2006	Electrical Insulating Materials -Thermal Endurance Properties -Part 5 Ageing Ovens : Section 1 Single-chamber Ovens	Identical under dual numbering
31	IS 8504 : PART 5 : SEC 2 : 2012/IEC 60216-4-2:2000	Electrical insulating materials - Thermal endurance properties: Part 5 ageing ovens: Sec 2 precision ovens for use up to 300°C	Identical under dual numbering
32	IS 8504 : PART 5 : SEC 3 : 2012/IEC 60216-4-3:2000	Electrical insulating materials - Thermal endurance properties: Part 5 ageing ovens: Sec 3 multi - Chamber ovens	Identical under dual numbering
33	IS 1271 : 2012/IEC 60085:2007	Electrical insulation - Thermal evaluation and designation (Second Revision)	Identical under dual numbering

34	IS 12747 : Part 2 : 2012/IEC 60626-2:2009	Combined flexible materials for electrical insulation: Part 2 methods of test (First Revision)	Identical under dual numbering
35	IS 13465 : Part 3 : Sec 1 : 2006/IEC 60455-3-1:2003	Resin based reactive compounds used for electrical insulation: Part 3 specifications for individual materials: Sec 1 unfilled epoxy resinous compounds (First Revision)	Identical under dual numbering
36	IS 13465 : Part 3 : Sec 2 : 2006/IEC 60455-3-2:2003	Resin based reactive compounds used for electrical insulation: Part 3 specifications for individual materials: Sec 2 quartz filled epoxy resinous compounds (First Revision)	Identical under dual numbering
37	IS 13465 : Part 3 : Sec 3 : 2006/IEC 60455-3-3:2003	Resin based reactive compounds used for electrical insulation: Part 3 specifications for individual materials: Sec 3 unfilled polyurethane compounds (First Revision)	Identical under dual numbering
38	IS 13465 : Part 3 : Sec 4 : 2006/IEC 60455-3-4:2003	Resin based reactive compounds used for electrical insulation: Part 3 specifications for - Individual materials: Sec 4 filled polyurethane compounds (First Revision)	Identical under dual numbering
39	IS 8516 : 2011/IEC 60426:2007	Electrical insulating materials - Determination of electrolytic corrosion caused by insulating materials - Test methods (First Revision)	Identical under dual numbering
40	IS/IEC 60371 : Part 3 : Sec 1 : 2006	Specification for insulating materials based on mica, Part 3 Specification for individual materials, Section 1 Commutator Separators and materials	Identical under single numbering
41	IS/IEC 60371 : Part 1 : 2003	Specification for insulating materials based on MICA: Part 1 definitions and general requirements	Identical under single numbering
42	IS/IEC 60371 : Part2 : 2004	Specification for insulating materials based on MICA: Part 2 methods of test	Identical under single numbering
43	IS/IEC 60371 : Part 3 : Sec 2 : 2005	Specification for Insulating Materials Based on MICA, Part 3 Specification for Individual Materials Section 2 Mica Paper	Identical under single numbering
44	IS 16498 : Part 2 : 2017/IEC 60641-2:2004	Specification for Pressboard and Presspaper for Electrical Purposes Part 2 Methods of Tests	Identical under dual numbering
45	IS 16499 : Part 1 : 2017/ IEC 60763-1 : 2010	Laminated Pressboard for Electrical Purposes Part 1 Definitions, Classification and General Requirements	Identical under dual numbering
46	IS 16498 : Part 1 : 2018/ IEC 60641-1:2007	Specification for Pressboard and Presspaper for Electrical Purposes Part 1 Definitions and General Requirements	Identical under dual numbering
47	IS 8504 : Part 8 : 2019/ IEC 60216-8 : 2013	Electrical insulating materials - Thermal endurance properties: Part 8 instructions for calculating thermal endurance characteristics using simplified procedures	Identical under dual numbering
48	IS 16498 : Part 3 : Sec 1 : 2019/ IEC 60641-3-1 : 2008	Specification for Pressboard and Presspaper for Electrical Purposes Part 3 Specifications for Individual Materials Sheet 1 Requirements for pressboard, types B.0.1, B.0.3, B.2.1, B.2.3, B.3.1, B.3.3, B.4.1, B.4.3, B.5.1, B.5.3 and B.6.1	Identical under dual numbering
49	IS 16498 : Part 3 : Sec 2 : 2019/ 60641-3-2 : 2007	Specification for Pressboard and Presspaper for Electrical Purposes Part 3 Specifications for Individual Materials Sheet 2 : Requirements for Presspaper, Types P.2.1, P.4.1, P.4.2, P.4.3 and P.6.1	Identical under dual numbering
50	IS 16499 : Part 3 : Sec 1 : 2019/ IEC 60763-3-1 : 2010	Laminated Pressboard for Electrical Purposes Part 3 Specifications for Individual Materials — Sheet 1 : Requirements for Laminated Pre Compressed Pressboard, Types LB3.1A.1, and LB3.1A.2	Identical under dual numbering

51	IS 10026 : Part 3 : Sec 3 : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 3 air drying varnishes with temperature index 130	Indigenous
52	IS 10026 : Part 3 : Sec 9 : 1986	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 9 baking varnishes with temperature index 130 for magnetic core sheets	Indigenous
53	IS 10163 : Part 1 : 1982/IEC 60377-1:1973	Recommended methods of tests for the determination of dielectric properties of insulating materials at frequencies above 300 MHZ: Part 1 general	Modified/Technically Equivalent
54	IS 11182 : Part 1:1984	Guide for the evaluation of insulation systems of electrical equipment: Part 1 identification, evaluation and ageing mechanisms	Indigenous
55	IS 11182 : Part 2 : 1984/IEC 60611:1978	Guide for the evaluation of insulation systems of electrical equipment: Part 2 thermal endurance test procedures	Modified/Technically Equivalent
56	IS 11182 : Part 3 : Sec 1 : 1986/IEC TS 60727-1:1982	Guide for the evaluation of insulation systems of electrical equipment: Part 3 electrical endurance test procedures: Sec 1 general considerations and evaluation procedures based on normal distributions	Modified/Technically Equivalent
57	IS 11182 : Part 5 : 1993/IEC 60941:1988	Guide for evaluation of insulation systems of electrical equipment: Part 5 mechanical endurance functional tests	Identical under dual numbering
58	IS 11182 : Part 6 : 1986/IEC TR 60791:1984	Guide for the evaluation of insulation systems of electrical equipment: Part 6 performance evaluation based on service experience and functional tests	Modified/Technically Equivalent
59	IS 11182 : Part 7 : Sec 1 : 1986/IEC TR 60792-1:1985	Guide for the evaluation of insulation systems of electrical equipment: Part 7 multi-factor functional testing: Sec 1 test procedures	Modified/Technically Equivalent
60	IS 11297 : Part 1:1985	Specification for varnished fabrics for electrical purposes: Part 1 definitions and general requirements	Indigenous
61	IS 11297 : Part 2 : 1988/IEC 60394-2:1972	Specification for varnished fabrics for electrical purposes: Part 2 methods of tests	Modified/Technically Equivalent
62	IS 11297 : Part 3 : Sec 1 : 1988/IEC Doc 15 C (CO)159	Specification for varnished fabrics for electrical purposes: Part 3 specifications for individual materials: Sec 1 glass fabric backed varnished fabrics	Modified/Technically Equivalent
63	IS 11298 : Part 3 : Sec 1 : 1991/ IEC Dot : 1X (Central Office) 143	Plastic films for electrical purposes - Specification: Part 3 specifications for individual materials: Sec 1 polypropylene films for capacitors (First Revision)	Modified/Technically Equivalent
64	IS 11298 : Part 3 : Sec 2 : 1990	Plastic films for electrical purposes - Specification: Part 3 specifications for individual materials: Sec 2 metallized polypropylene films	Indigenous
65	IS 11298 : Part 3 : Sec 4 : 1998/IEC 60674-3-3:1992	Plastic films for electrical purposes: Part 3 specifications for individual materials: Sec 4 requirements for polycarbonate (PC) films used for electrical insulation	Identical under dual numbering
66	IS 11298 : Part 3 : Sec 8 : 1998/IEC 60674-3-7:1992	Plastic films for electrical purposes: Part 3 specifications for individual materials: Sec 8 requirements for fluoroethylene - Propylene (FEP) films used for electrical insulation	Identical under dual numbering
67	IS 11654 : Part 3 : Sec 1 : 1988/ IEC Dot 15C (Central Office) 204 Sheets 100 and 103	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 1 general purpose grade sleeving with temperature index 90	Modified/Technically Equivalent
68	IS 11654 : Part 3 : Sec 403 : 1989/ IEC Doc 15C (C.O) 200	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 403 glass textile sleeving with acrylic based coating - High breakdown strength	Modified/Technically Equivalent

69	IS 11731 : Part 2 : 1986/ IEC 60707: 1981	Methods of test for determination of flammability of solid electrical insulating materials when exposed to an igniting source: Part 2 vertical specimen method	Modified/Technically Equivalent
70	IS 11755 : 1986/IEC 60345:1971	Method of test for Determination of electrical Resistance and resistivity of Insulating materials at elevated Temperatures	Modified/Technically Equivalent
71	IS 11756 : 1986/IEC 60648:1979	Method of test for coefficients of friction of plastic film and sheeting for use as electrical insulation	Modified/Technically Equivalent
72	IS 12316 : Part 1 : 1988/ IEC Dot: 15C (Central Office) 131	Specification for non - Cellulosic papers for electrical purposes: Part 1 definitions and general requirements	Modified/Technically Equivalent
73	IS 12316 : Part 2 : 1988	Specification for non - Cellulosic papers for electrical purposes: Part 2 methods of test	Indigenous
74	IS 12316 : Part 3 : Sec 1 : 1988/ IEC Dot 15C (Central Office) 146	Specification for non - Cellulosic papers for electrical purposes: Part 3 requirements for individual materials: Sec 1 unfilled aramid (Aromatic Polyamide) papers calendered	Modified/Technically Equivalent
75	IS 12316 : Part 3 : Sec 2 : 1988/ IEC Dot 15C (Central Office) 146	Specification for non-cellulosic papers for electrical purposes: Part 3 requirements for individual materials: Sec 2 unfilled aramid (Aromatic Polyamide) paper, uncalendered	Modified/Technically Equivalent
76	IS 12317 : Part 1 : 1988/IEC 60672-1:1980	Specification for ceramic and glass insulating materials for telecommunication and allied purposes: Part 1 general requirements and classification of ceramic and glass insulating materials	Modified/Technically Equivalent
77	IS 13335 : 1992	Muscovite mica scrap for mica paper - Specification	Indigenous
78	IS 13357 : 1992/ ASTM : D2131	Methods of grading and visual classification of muscovite mica splittings	Modified/Technically Equivalent
79	IS 13465 : Part 3 : Sec 5 : 1998	Solventless polymerisable resinous compounds used for electrical insulation - Specification: Part 3 specifications for individual materials: Sec 5 epoxy phenolnovolac resin	Indigenous
80	IS 13884 : 1993	Muscovite mica flakes and mica powder for industrial applications	Indigenous
81	IS 14353 : 1996	Guide for determining compatibility between enamelled winding wire and impregnating compounds	Indigenous
82	IS 14672 : 1999	Method of test for high voltage low current dry arc resistance of solid electrical insulation	Indigenous
83	IS 1576 : 1992	Solid pressboard for electrical purposes - Specification (First Revision)	Indigenous
84	IS 2259 : 1963/ IEC Document 15 (Central Office) 25 Draft	Methods of test for determination of insulation resistance of solid insulating materials	Modified/Technically Equivalent
85	IS 2464 : 1963	Specification for built-up mica for electrical purposes	Indigenous
86	IS 2584 : 1963	Method of test for electric strength of solid insulating materials at power frequencies	Indigenous
87	IS 5711 : 1970	Specification for vulcanized fibre rods and tubes for electrical purposes	Modified/Technically Equivalent
88	IS 7571 : 1974	Methods of tests for ceramics for telecommunication and allied purposes	Indigenous
89	IS 8504 : Part 3 : 1994/IEC 216-3	Guide for determination of thermal endurance properties of electrical insulating materials Part 3: Statistical methods	Modified/technically Equivalent
90	IS 11654 : Part 3 : Sec 406 : 1989/ IEC Dot : 15C (Central Office) 199, Sheet 406	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 406 glass textile sleeving with pvc based coating - High breakdown strength	Modified/Technically Equivalent

91	IS 11654 : Part 3 : Sec 103 : 1989/IEC Doc : 15 C (Central Office) 204 Sheet 103	Specification for flexible insulating sleevings: Part 3 specifications for individual types of sleevings: Sec 103 general purpose - Grade sleeving with unilateral tolerances with temperature index 90	Modified/Technically Equivalent
92	IS 11654 : Part 3 : Sec 404 : 1989/ IEC Dot 15C (Central Office 200, Sheet 404	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 404 glass textile sleeving with acrylic based coating - Medium breakdown strength	Modified/Technically Equivalent
93	IS 11654 : Part 3 : Sec 405 : 1989/ IEC Dot 15C (Central Office 200, Sheet 405	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 405 glass textile sleeving with acrylic based coating - Lower breakdown strength	Modified/Technically Equivalent
94	IS 11654 : Part 3 : Sec 407 : 1989/ IEC Dot : 15C (Central Office) 199, Sheet 407	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 407 glass textile sleeving with pvc based coating - Medium breakdown strength	Modified/Technically Equivalent
95	IS 11654 : Part 3 : Sec 408 : 1989/IEC Dot 15C (C.O.) 199, Sheet 408	Specification for flexible insulating sleeving: Part 3 specifications for individual types of sleevings: Sec 408 glass textile sleeving with pvc based coating - Lower breakdown strength	Modified/Technically Equivalent
96	IS 6659 : 1976	Electronic Grade Ceramic Materials	Indigenous
97	IS 10026 : Part 3 : Sec 4 : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 4 baking varinishes with temperature index 120	Indigenous
98	IS 10026 : Part 3 : Sec 5 : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 5 baking varnishes with temperature index 130	Indigenous
99	IS 10026 : Part 3 : Sec 6 : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 6 baking varnishes with temperature index 155	Indigenous
100	IS 10026 : Part 3 : Sec 7 : 1983	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 7 baking varnishes with temperature index 180	Indigenous
101	IS 10026 : Part 1 : 1998	Insulating varnishes containing solvents: Part 1 definitions and general requirements (First Revision)	Modified/Technically Equivalent
102	IS 10026 : Part 3 : Sec 8 : 1986	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 8 baking varnishes with temperature index 200	Indigenous
103	IS 10192 : 1982	Specification for synthetic resin bonded glass fibre (SRBGF) for electrical purposes	Modified/Technically Equivalent
104	IS 10333 : 1982	Specification for epoxy resin systems for cast resin insulated power and control cable joints and terminations up to and including 11 kV	Indigenous
105	IS 10581 : 1983	Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids	Modified/Technically Equivalent
106	IS 11221 : 1984	Recommended test methods for determining the relative resistance of insulating materials to breakdown by surface discharges	Modified/Technically Equivalent
107	IS 11256 : Part 2 : 1985	Method of test for determination of thermal endurance of insulating varnishes: Part 2 measurement of loss of mass	Modified/Technically Equivalent Method of test for determina
108	IS 11256 : Part 3 : 1985	Method of test for determination of thermal endurance of insulating varnishes: Part 3 bond strength by helical coil method	Modified/Technically Equivalent
109	IS 1175 : 1981	Methods for grading and classification of muscovite mica blocks, thins and films (First Revision)	Indigenous
110	IS 13066 : 1991	Prepreg based on glass woven fabric for electrical applications - Specification	Indigenous
111	IS 2448 : Part 1 : 1963	Specification for adhesive insucating tapes for electrical purposes: Part 1 tapes with cotton textile substrates	Modified/Technically Equivalent

112	IS 3396 : 1979	Methods of test for volume and surface resistivity of solid electrical insulating materials (First Revision)	Modified/Technically Equivalent
113	IS 4248 : 1967	Specification for non - Ignitable and self - Extinguishing boards (With Mineral Base) for electrical purposes	Modified/Technically Equivalent
114	IS 4249 : 1967	Classification and methods of tests for non - Ignitable and self - Extinguishing properties of solid electrical insulating materials	Modified/Technically Equivalent
115	IS 4819 : 1968	Specification for thin vulcanized fibre sheet (Including Leatheroid) for electrical purposes	Indigenous
116	IS 5596 : 1970	Methods of test for determining deleterious substances in fibrous insulating materials	Modified/Technically Equivalent
117	IS 6230 : 1970	Specification for woven asbestos tape for electrical insulating purposes	Modified/Technically Equivalent
118	IS 7084 : 1973	Specification for bitumen - Based filling compounds for electrical purposes	Modified/Technically Equivalent
119	IS 7755 : 1975	Specification for high tension insulating cotton tape impregnated with bitumen - Based compound	Indigenous
120	IS 9043 : 1979	Method for grading (By Size) of phlogopite mica blocks, thins and splittings	Modified/Technically Equivalent
121	IS 9044 : 1979	Method of measuring thickness of mica blocks, thins, films and splittings	Modified/Technically Equivalent
122	IS 9045 : 1979	Thermal classification of phlogopite mica splittings	Modified/Technically Equivalent
123	IS 9455 : 1980	Classification of muscovite mica blocks, thins and films based on electrical properties	Modified/Technically Equivalent
124	IS 9502 : 1980	Specification for muscovite mica components for electronic equipment	Modified/Technically Equivalent

ANNEX 7

Status of Indian Standards which are Adopted/Harmonised with IEC and due for Review

Sl. No.	IS No.	Adopted/Harmonized IEC Standard	Degree of Equivalence	Current Status of IECStandard	Status
1	IS 10026 : Part 3 : Sec 1 : 1999/IEC 60464-3-1:1986	IEC 60464-3-1:1986	Modified/Technically Equivalent	IEC 60464-3-1:2001	
2	IS 10026 : Part 3 : Sec 2 : 1999/IEC 60464-3-2:1989	IEC 60464-3-2:1989	Modified/Technically Equivalent	IEC 60464-3-2:2001	
3	IS 10026 : Part 2 : 1999/IEC 60464-2:1974	IEC 60464-2:1974	Modified/Technically Equivalent	IEC 60464-2:2001	
4	IS 11182 : Part 3 : Sec 2 : 1996	IEC TS 60727-2:1993	Modified/Technically Equivalent	IEC TS 60727-2:1993 has been withdrawn.	
5	IS 11731 : Part 1 : 1986	IEC 60707: 1981	Modified/Technically Equivalent	IEC 60707: 1981 has been withdrawn and replaced by IEC 60695-11-20:2015	
6	IS 13508 : 1992	IEC TR 60894: 1987	Modified/Technically Equivalent	IEC TR 60894: 1987 has been withdrawn and replaced by IEC 60034-27-3:2015	
7	IS 7809 : Part 1 : 1975	IEC 60454-1:1974	Modified/Technically Equivalent	IEC 60454-1:1992	
8	IS 7809 : Part 3 : Sec 1 : 1986	IEC 60454-3-1:1976	Modified/Technically Equivalent	IEC 60454-3-1:1998	
9	IS 7809 : Part 3 : Sec 2 : 1981	IEC 60454-3-2:1981	Modified/Technically Equivalent	IEC 60454-3-2:2006	
10	IS 7809 : Part 3 : Sec 3 : 1981	IEC 60454-3-3:1981	Modified/Technically Equivalent	IEC 60454-3-2:2006	
11	IS 7809 : Part 3 : Sec 4 : 1977	IEC 60454-3-4 (draft)	Modified/Technically Equivalent	IEC 60454-3-4:2007	
12	IS 7809 : Part 3 : Sec 5 : 1977	IEC 60454-3-5 (draft)	Modified/Technically Equivalent	IEC 60454-3-4:2007	
13	IS 9335 : Part 3 : Sec 1 : 1984	IEC 60554-3-1: 1979	Modified/Technically Equivalent	IEC 60554-3-1: 1979	
14	IS 9335 : Part 3 : Sec 3 : 1984	IEC 60554-3-3: 1980	Modified/Technically Equivalent	IEC 60554-3-3: 1980	
15	IS 9335 : Part 3 : Sec 4 : 1984	IEC 60554-3-4:1979	Modified/Technically Equivalent	IEC 60554-3-4:1979	
16	IS 9335 : Part 3 : Sec 5 : 1985	IEC 60554-3-5:1984	Modified/Technically Equivalent	IEC 60554-3-5:1984	
17	IS 8504 : Part 4 : 2013	IEC 60216-3:2006	Identical under dual numbering	IEC 60216-3:2021	
18	IS 8504 : PART 6 : 2012	IEC 60216-5:2008	Identical under dual numbering	IEC 60216-5:2022	
19	IS 8504 : PART 7 : 2012	IEC 60216-6:2006	Identical under dual numbering	IEC 60216-6:2022	
20	IS 12747 : Part 1 : 2011	IEC 60626-1:2009	Identical under dual numbering	IEC 60626-1:2023	
21	IS 13465 : Part 2 : 2005	IEC 60455-2:1998	Identical under dual numbering	IEC 60455-2:2023	

22	IS 13465 : Part 3 : Sec 6 : 2006	IEC 60455-3-5:2001	Identical under dual numbering	IEC 60455-3-5:2006	
23	IS 15218 : Part 1 : 2002	IEC 60544-1:1994	Identical under dual numbering	IEC 60544-1: 2013	
24	IS 2824 : 2007	IEC 60112:2003	Identical under dual numbering	IEC 60112:2020	
25	IS 8504 : Part 1 : 2012	IEC 60216-1:2001	Identical under dual numbering	IEC 60216-1:2013	
26	IS 9947 : 2011	IEC 60587:2007	Identical under dual numbering	/IEC 60587:2022	
27	IS 8504 : PART 5 : SEC 1 : 2012	IEC 60216-4-1:2006	Identical under dual numbering	IEC 60216-4-1:2006	Reaffirmed
28	IS 8504 : PART 5 : SEC 2 : 2012	IEC 60216-4-2:2000	Identical under dual numbering	IEC 60216-4-2:2000	Reaffirmed
29	IS 8504 : PART 5 : SEC 3 : 2012	IEC 60216-4-3:2000	Identical under dual numbering	IEC 60216-4-3:2000	Reaffirmed
30	IS 1271 : 2012	IEC 60085:2007	Identical under dual numbering	IEC 60085:2007	Reaffirmed
31	IS 12747 : Part 2 : 2012	IEC 60626-2:2009	Identical under dual numbering	IEC 60626-2:2009	Reaffirmed
32	IS 13465 : Part 3 : Sec 1 : 2006	IEC 60455-3-1:2003	Identical under dual numbering	IEC 60455-3-1:2003	Reaffirmed
33	IS 13465 : Part 3 : Sec 2 : 2006	IEC 60455-3-2:2003	Identical under dual numbering	IEC 60455-3-2:2003	Reaffirmed
34	IS 13465 : Part 3 : Sec 3 : 2006	IEC 60455-3-3:2003	Identical under dual numbering	IEC 60455-3-3:2003	Reaffirmed
35	IS 13465 : Part 3 : Sec 4 : 2006	IEC 60455-3-4:2003	Identical under dual numbering	IEC 60455-3-4:2003	Reaffirmed
36	IS 8516 : 2011/IEC 60426:2007	IEC 60426:2007	Identical under dual numbering	IEC 60426:2007	Reaffirmed
37	IS/IEC 60371 : Part 3 : Sec 1 : 2006	IEC 60371 : Part 3 : Sec 1 : 2006	Identical under single numbering	IEC 60371 : Part 3 : Sec1 : 2006	Reaffirmed
38	IS/IEC 60371 : Part 1 : 2003	IEC 60371 : Part 1 : 2003	Identical under single numbering	IEC 60371 : Part 1 : 2003	Reaffirmed
39	IS/IEC 60371 : Part2 : 2004	IEC 60371 : Part2 :2004	Identical under single numbering	IEC 60371 : Part2 :2004	Reaffirmed
40	IS/IEC 60371 : Part 3 : Sec 2 : 2005	IEC 60371 : Part 3 : Sec 2 : 2005	Identical under single numbering	IEC 60371 : Part 3 : Sec2 : 2005	Reaffirmed
41	IS 16498 : Part 2 : 2017	IEC 60641-2:2004	Identical under dual numbering	IEC 60641-2:2004	Being Reaffirmed
42	IS 16499 : Part 1 : 2017	IEC 60763-1 : 2010	Identical under dual numbering	IEC 60763-1 : 2010	Reaffirmed
43	IS 16498 : Part 1 : 2018	IEC 60641-1:2007	Identical under dual numbering	IEC 60641-1:2007	Reaffirmed
44	IS 8504 : Part 8 : 2019	IEC 60216-8 : 2013	Identical under dual numbering	IEC 60216-8 : 2013	Reaffirmed
45	IS 16498 : Part 3 : Sec 1 : 2019	IEC 60641-3-1 : 2008	Identical under dual numbering	IEC 60641-3-1 : 2008	Reaffirmed
46	IS 16498 : Part 3 : Sec 2 : 2019	IEC 60641-3-2 : 2007	Identical under dual numbering	IEC 60641-3-2 : 2007	Reaffirmed
47	IS 16499 : Part 3 : Sec 1 : 2019	IEC 60763-3-1 : 2010	Identical under dual numbering	IEC 60763-3-1 : 2010	Reaffirmed

48	IS 10163 : Part 1 : 1982	IEC 60377-1:1973	Modified/Technically Equivalent	IEC 60377-1:1973	
49	IS 15652 : 2006	IEC 61111:1992	Modified/Technically Equivalent	IEC 61111: 2009	
50	IS 11182 : Part 2 : 1984	IEC 60611:1978	Modified/Technically Equivalent	IEC 60611:1978 (Withdrawn)	
51	IS 11182 : Part 3 : Sec 1 : 1986	IEC TS 60727-1:1982	Modified/Technically Equivalent	IEC TS 60727-1:1982 (Withdrawn)	
52	IS 11182 : Part 5 : 1993	IEC 60941:1988	Identical under dual numbering	IEC 60941:1988 (Withdrawn and superseded by IEC 60505:2011)	
53	IS 11182 : Part 6 : 1986	IEC TR 60791:1984	Modified/Technically Equivalent	IEC TR 60791:1984 (Withdrawn and superseded by IEC 60505:2011)	
54	IS 11182 : Part 7 : Sec 1 : 1986	IEC TR 60792-1:1985	Modified/Technically Equivalent	IEC TR 60792-1:1985 (Withdrawn and superseded by IEC60505:2011)	
55	IS 11297 : Part 2 : 1988	IEC 60394-2:1972	Modified/Technically Equivalent	IEC 60394-2:1972	
56	IS 11297 : Part 3 : Sec 1 : 1988	IEC Doc 15 C (CO)159	Modified/Technically Equivalent	IEC 60394-3-2:1988	
57	IS 11298 : Part 3 : Sec 1 : 1991	IEC Dot : 1X (CentralOffice) 143	Modified/Technically Equivalent	IEC 60674-3-1:2021	
58	IS 11298 : Part 3 : Sec 4 : 1998	IEC 60674-3-3:1992	Identical under dual numbering	IEC 60674-3-3:2023	
59	IS 11298 : Part 3 : Sec 8 : 1998	IEC 60674-3-7:1992	Identical under dual numbering	IEC 60674-3-7:2023	
60	IS 11654 : Part 3 : Sec 1 : 1988	IEC Dot 15C (Central Office) 204 Sheets 100 and 103	Modified/Technically Equivalent	IEC 60684-3-100:2001	
61	IS 11654 : Part 3 : Sec 403 : 1989	IEC Doc 15C (C.O) 200, Sheet 403	Modified/Technically Equivalent	IEC 60684-3-403:2002	
62	IS 11731 : Part 2 : 1986	IEC 60707: 1981	Modified/Technically Equivalent	IEC 60707: 1981(Withdrawn andsuperseded by IEC 60695-11-20:2015)	
63	IS 11755 : 1986	IEC 60345:1971	Modified/Technically Equivalent	IEC 62631-3-4:2019	
64	IS 11756 : 1986	IEC 60648:1979	Modified/Technically Equivalent	IEC 60648:1979 (Withdrawn)	
65	IS 12316 : Part 1 : 1988	IEC Dot: 15C (CentralOffice) 131	Modified/Technically Equivalent	IEC 60819-1:2009	
66	IS 12316 : Part 3 : Sec 1 : 1988	IEC Dot 15C (CentralOffice) 146-	Modified/Technically Equivalent	IEC 60819-3-3:2011	
67	IS 12316 : Part 3 : Sec 2 : 1988	IEC Dot 15C (CentralOffice) 146	Modified/Technically Equivalent	IEC 60819-3-3:2011	
68	IS 12317 : Part 1 : 1988	IEC 60672-1:1980	Modified/Technically Equivalent	IEC 60672-1:1995	
		IEC Document 15		IEC 62631-3-3:2015	

69	IS 2259 : 1963	(Central Office) 25Draft	Modified/Technically Equivalent		
70	IS 8504 : Part 3 : 1994	IEC 216-3	Identical under dual numbering	IEC 60216-3:2021	
71	IS 11654 : Part 3 : Sec 406 : 1989	IEC Dot : 15C (CentralOffice) 199	Modified/Technically Equivalent	IEC 60684-3-406-2003	
72	IS 11654 : Part 3 : Sec 103 : 1989	IEC Doc : 15 C (Central Office) 204Sheet 103	Modified/Technically Equivalent	IEC 60684-3-100:2001	
73	IS 11654 : Part 3 : Sec 404 : 1989	IEC Dot 15C (CentralOffice 200, Sheet 404	Modified/Technically Equivalent	IEC 60684-3-403:2002	
74	IS 11654 : Part 3 : Sec 405 : 1989	IEC Dot 15C (CentralOffice 200, Sheet 405-	Modified/Technically Equivalent	IEC 60684-3-403:2002	
75	IS 11654 : Part 3 : Sec 407 : 1989	IEC Dot : 15C (CentralOffice) 199, Sheet 407	Modified/Technically Equivalent	IEC 60684-3-406:2003	
76	IS 11654 : Part 3 : Sec 408 : 1989	IEC Dot 15C (C.O.) 199, Sheet 408	Modified/Technically Equivalent	IEC 60684-3-406:2003	

ANNEX 8

REVIEW OF INDIAN STANDARDS EXCEEDING TIMELINES

Sl. No.	IS No.	Title of Indian Standard	Remarks
1	IS 10026: Part 2: 1999	Insulating varnishes containing solvents: Part 2 methods of tests (First Revision)	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
2	IS 10026: Part 3: Sec 1	Insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 1 requirements for cold curing finishing varnishes (First Revision)	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
3	IS 10026: Part 3: Sec 2	Insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 2 requirements for hot curing varnishes (First Revision)	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
4	IS 10026 : Part 3 : Sec 4	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 4 baking varnishes with temperature index 120	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
5	IS 10026 : Part 3 : Sec 5	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 5 baking varnishes with temperature index 130	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
6	IS 10026 : Part 3 : Sec 6	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 6 baking varnishes with temperature index 155	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
7	IS 10026: Part 3: Sec 7	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 7 baking varnishes with temperature index 180	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
8	IS 10026 : Part 3 : Sec 8	Specification for insulating varnishes containing solvents: Part 3 specifications for individual materials: Sec 8 baking varnishes with temperature index 200	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
9	IS 10333: 1982	Specification for epoxy resin systems for cast resin insulated power and control cable joints and terminations up to and including 11 kV	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
10	IS 1175: 1981	Methods for grading and classification of muscovite mica blocks, thins and films (First Revision)	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
11	IS 12747 : Part 1: 2011/IEC 60626-1:2009	Combined flexible materials for electrical insulation: Part 1 definitions and general requirements (First Revision)	The current status of equivalent IEC Standard is IEC 60626-1:2023, which has been sent through email dated 18.11.2024.
12	IS 13066: 1991	Prepreg based on glass woven fabric for electrical applications - Specification	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
13	IS 13508: 1992	Test procedure for measurement of loss tangent angle of coils and bars for machine winding - Guide	Equivalent IEC Standard IEC TR 60894:1987 has been withdrawn and replaced by IEC 60034-27-3:2015. The revised IEC standard has been circulated through email dated 18.11.2024.

14	IS 15652:2006	Insulating mats for electrical purposes - Specification	Review Report submitted by intern and Comments received on IS 15652 have already been circulated with agendas of 27th and 28th ETD 02 Sectional Committee meeting.
15	IS 2824: 2007/IEC 60112:2003	Method for the determination of the proof and the comparative tracking indices of solid insulating materials (Second Revision)	The revised equivalent standard i.e. IEC 60112:2020. The same has been circulated through email dated 18.11.2024.
16	IS 4248: 1967	Specification for non - Ignitable and self - Extinguishing boards (With Mineral Base) for electrical purposes	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
17	IS 4249: 1967	Classification and methods of tests for non - Ignitable and self - Extinguishing properties of solid electrical insulating materials	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
18	IS 6230: 1970	Specification for woven asbestos tape for electrical insulating purposes	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
19	IS 7084: 1973	Specification for bitumen - Based filling compounds for electrical purpose	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
20	IS 7755: 1975	Specification for high tension insulating cotton tape impregnated with bitumen - Based compound	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
21	IS 8504 : Part 1: 2012/IEC 60216-1:2001	Electrical insulating materials - Thermal endurance properties: Part 1 ageing procedures and evaluation of test results (Second Revision)	The revised equivalent standard i.e. IEC 60216-1:2013. The same has been circulated through email dated 18.11.2024.
22	IS 8504 (Part 4) : 2013/IEC 60216 - 3 : 2006	Electrical insulating materials - Thermal endurance properties: Part 4 instructions for calculating thermal endurance characteristics (First Revision)	The revised equivalent standard i.e. IEC 60216-3:2021. The same has been circulated through email dated 18.11.2024.
23	IS 8504 (Part 6):2012/IEC 60216-5:2008	Electrical insulating materials - Thermal endurance properties: Part 6 determination of relative thermal endurance index (RTE) of an insulating material	The revised equivalent standard i.e. IEC 60216-5:2022. The same has been circulated through email dated 18.11.2024.
24	IS 8504 (Part 7):2012/IEC 60216-6:2006	Electrical insulating materials - Thermal endurance properties: Part 7 determination of thermal endurance indices (TI And RTE) of an insulating material using the fixed time frame method.	The revised equivalent standard i.e. IEC 60216-6:2022. The same has been circulated through email dated 18.11.2024.
25	IS 9044: 1979	Method of measuring thickness of mica blocks, thins, films and splittings	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
26	IS 9045: 1979	Thermal classification of phlogopite mica splittings	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
27	IS 9502: 1980	Specification for muscovite mica components for electronic equipment	ARP report submitted by BIS officer has already been circulated through the BIS Standards portal and email dated 18.11.2024.
28	IS 9947: 2011/IEC 60587:2007	Electrical insulating materials used under severe ambient conditions - Test methods for	The revised equivalent standard i.e. IEC 60587-2022. The same has been

		evaluating resistance to tracking and erosion (First Revision)	circulated through email dated 18.11.2024.
29	IS 7809 (Part 1): 1975	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 1 general requirements	Review Report submitted by intern has already been circulated with the agenda of 28th ETD 02 Sectional Committee meeting.
30	IS 7809 (Part 2): 1977	Specification for pressure sensitive adhesive tapes for electrical purpose : Part 2 methods of test	Review Report submitted by intern has already been circulated with the agenda of 28th ETD 02 Sectional Committee meeting.
31	IS 7809 (Part 3/Sec 1): 1986	Specification for pressure sensitive adhesive insulating tapes for electrical purposes: Part 3 requirements or individual materials: Sec 1 plasticized polyvinylchloride tapes with non - Thermosetting adhesive (First Revision)	Review Report submitted by intern has already been circulated with the agenda of 28th ETD 02 Sectional Committee meeting.
32	IS 7809 (Part 3/Sec 2): 1981	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 Specifications for individual materials: Sec 2 Polyester film tapes (PETP) with thermosetting adhesive	Review Report submitted by intern has already been circulated with the agenda of 28th ETD 02 Sectional Committee meeting.
33	IS 7809 (Part 3/Sec 3): 1981	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specification for individual materials: Sec 3 polyster film tapes (PETP) with non - Thermosetting adhesive	Review Report submitted by intern has already been circulated with the agenda of 28th ETD 02 Sectional Committee meeting..
34	IS 7809 (Part 3/Sec 4): 1977	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specifications for individual materials: Sec 4 cellulosic paper, creped with thermosetting adhesive	Review Report submitted by intern has already been circulated with the agenda of 28th ETD 02 Sectional Committee meeting.
35	IS 7809 (Part 3/Sec 5): 1977	Specification for pressure sensitive adhesive tapes for electrical purposes: Part 3 specifications for individual materials: Sec 5 cellulosic paper with thermosetting adhesive	Review Report submitted by intern has already been circulated with the agenda of 28th ETD 02 Sectional Committee meeting.

ANNEX 9

Format for submitting New Work Item proposal for new Indian Standard

Part-1

1. Name & Designation - **Sachin Patel**
2. Email ID - **sachin.patel@sevitsil.biz**
3. Contact No - **7486002581**
4. Organization – **Suresh Enterprises**

Part – 2

5. Proposed title of Standard – **Silicone Overhead Sleeve**

6. Aspect (Product standard/ code of practice / test method etc) – **Product Standard**

7. Define subject of standard – **Silicone Overhead Sleeve**

8. Select Most Relevant Technical Department – **ETD02**

Part – 3

9. Scope of proposed standard – **This International Standard is applicable to Silicone overhead sleeves for insulating the overhead line to save power disruption. The products designed and manufactured according to this standard contribute to the safety of the users provided they are used by skilled persons, in accordance with safe methods of work and the instructions for use.**

10. Purpose and Justification – **Purpose of standard is the product standardization for getting similarity specification at all the user industries, And also same testing method to be defined for all the end user application & Manufacturing end.**

11. Likely users of standards and their input, if any – **1) Product's locking system properly required during installment time. 2) For the proper safety covering of the conductor, use a silicone Cable tie for the proper fitment.**

12. Details of International standards/series of standard/system standard on the subject – **Not available**

13. Name and address of manufacturers/ implementing/ industries/ purchasing organization /component supplier/ raw material supplier,

Manufacturer - Suresh Enterprises, C1/55, GIDC phase-II, Dediyasan, Mehsana-384002, Gujarat, India

Clients - 1) Tata Power Delhi Distribution Limited
2) Adani Green Energy Limited
3) The Tamil Nadu Generation and Distribution Corporation

Competitor - Shine Industries, Vadodara

Suppliers - 1) wacker chemie ag, Germany
2) The Dow Chemical Company (DOW Corning)
3) Shin-Etsu Chemical Co., Ltd, Japan

4) KCC Silicone Corporation

14. Any specific problem being faced without this standard – **Customer wise 1) test method is different, 2) No. of test requirement is different, 3) Test specification is different.**
So, It's difficult to maintain the multiple test procedure without any global standard.

15. Bearing with Govt. legislation regulation, etc. – **Not applicable**

16. Status of the industry in the country (Export-Import data) – **Export data not available for particular these products. Also HSN code is common for all the silicone profiles. (HSN Code - 40082990)**

17. Availability of test facilities in the country – **Required testing facilities available in india at below lab,**

1) **CPRI - Central Power Research Institute**
2) **ERDA - Electrical Research & Development Association**
3) **IRMRA - Indian Rubber Manufacturers Research Association**

18. Details of Relevant supportive document – **As per customer requirement, please find the attached GTP of Silicone Overhead sleeve.**

19. R & D work done in India – **Information not available**

20. Impact on Sustainable Development Goals (SDGs) -

ANNEX 10

3A Associates Incorporated
306 Advent Atria, Chincholi Bunder Road, Malad West,Mumbai 400 064,(India)
Phone:- +91 7666897333, 8928856967
Email:- sales@3aassociate.comWebsite: www.3aassociate.com

3A ConductorSleeve for Overhead Line

Enhance Revenues and Improves Safety

Key Features

- When compared to Bare Conductors, Enhanced Utility revenues through reduced faults and downtime caused by falling trees.
- Simpler installation
- Reduced phase to phase clearance, making construction and right of way easier.
- Reduced clearance from trees or buildings, making construction easier.
- Reduced risk of forest fires.
- Reduced faults due to animals.
- Reduced maintenance cost due to tree maintenance.
- Reduced risk of human tampering,Electricity theft is made harder
- Reduced risk of corrosion of the internal conductor.
- Reduced risk of human electrocution, Saves Life

Causes Of Flash Over

Insulation Sleeves reduces Overhead Conductor Clearance Infringement outages.

These covers are designed to insulate existing bare lines without costly conductor replacement expenditure or additional line hardware.

Excellent tracking resistance,ease of use and wrap around Can be used in situ without conductor disconnection.

3A Associates Incorporated
306 Advent Atria, Chincholi Bunder Road, Malad West,Mumbai 400 064,(India)
Phone:- +91 7666897333, 8928856967
Email:- sales@3aassociate.comWebsite: www.3aassociate.com

TechnicalData

Property	TypicalValue	Test Method
Tracking and ErosionResistance	Notrackingorerosiontotopsurfaceorflame failureafter:1hr.at 2.5kV 1 hr.at2.75kV 1 hr.at3.0kV 20minat3.25kV	ASTMD2303
VolumeResistivity	1 x10^{13} Ohm cm min.	ASTMD257
DielectricStrength	>120 kV/cm(300V/mil)	ASTMD149
OzoneResistance	NoCracks	ASTMD1149
AcceleratedAging168 hrs.150°CTensileStrength	1.3 MPa	ASTMD412
Accelerated Aging 168 hrs.150°CUltimateElongation.	90%Min	ASTMD412
Low Temperature Flexibility4hrs.-20°C	No Cracking	ASTMD2671

It is used along With **SHold™Tape** for Water Sealing.
S Hold™ Tape also known as HT Tape is a high temperature arc and track-resistant tape used for insulation application.

Date:01/04/2022

ANNEX 11

TC15 Work Programme					
Project Reference	**Title**	**Document Reference**	**Current Stage**	**Next Stage**	**Fcst. Publ. Date**
IEC 60371-3-7 ED2	Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 7: Polyester film mica paper with an epoxy resin binder for single conductor taping	15/961A/RR	ACD	CD	2025-12
IEC 60554-1 ED2	Specification for cellulosic papers for electrical purposes. Part 1: Definitions and general requirements	15/989/RR	ACD	CD	2026-01
IEC 60554-2 ED3	Cellulosic papers for electrical purposes - Part 2: Methods of test	15/990/RR	ACD	CD	2026-01
IEC 60554-3-1 ED2	Specification for cellulosic papers for electrical purposes. Part 3-1: Specifications for individual materials. General purpose electrical paper	15/991/RR	ACD	CD	2026-01
IEC 60554-3-2 ED2	Cellulosic papers for electrical purposes - Part 3: Specifications for individual materials - Sheet 2: Capacitor paper	15/992/RR	ACD	CD	2026-01
IEC 60554-3-3 ED2	Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 3: Crêpe paper	15/993/RR	ACD	CD	2026-01
IEC 60554-3-4 ED2	Specification for cellulosic papers for electrical purposes. Part 3-4: Specifications for individual materials. Electrolytic capacitor paper	15/994/RR	ACD	CD	2026-01
IEC 60554-3-5 ED2	Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 5: Special papers	15/995/RR	ACD	CD	2026-01
IEC 60554-3-6 ED1	Specification for cellulosic papers for electrical purposes – Part 3: Specifications for individual materials – Sheet 6: Presspaper	15/986/NP	ACD	CD	2026-01
IEC 60626-2 ED4	Combined flexible materials for electrical insulation - Part 2: Methods of test	15/1033/RR	ACD	CD	2025-11
IEC 60641-1 ED3	Pressboard and presspaper for electrical purposes - Part 1: Definitions and general requirements	15/1011/RR	ACDV	TCDV	2026-01
IEC 60641-2 ED3	Pressboard and presspaper for electrical purposes - Part 2: Methods of tests	15/1012/RR	ACDV	TCDV	2026-01

IEC 60641-3-1 ED3	Pressboard and presspaper for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Requirements for pressboard, types B.0.1, B.0.3, B.2.1, B.2.3, B.3.1, B.3.3, B.4.1, B.4.3, B.5.1, B.5.3 and B.6.1	15/1013/RR	ACDV	TCDV	2026-01
IEC 60641-3-2 ED3	Pressboard and presspaper for electrical purposes - Part 3: Specifications for individual materials - Sheet 2: Requirements for presspaper, types P.2.1, P.4.1, P.4.2, P.4.3 and P.6.1	15/1014/RR	ACDV	TCDV	2026-01
IEC 60684-2 ED4	Flexible insulating sleeving - Part 2: Methods of test	15/1034/CDV	AFDIS	DECFDIS	2025-07
IEC 60684-3-281 ED2	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 281: Heat-shrinkable, polyolefin sleeving, semiconductive	15/946/CDV	AFDIS	DECFDIS	2025-05
IEC 60684-3-282 ED2	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 282: Heat-shrinkable, polyolefin sleeving - Stress control	15/947/CDV	AFDIS	DECFDIS	2025-05

TC112 Work Programme					
Project Reference	**Title**	**Document Reference**	**Current Stage**	**Next Stage**	**Fcst. Publ. Date**
IEC 60112 ED6	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	112/643/CDV	AFDIS	DECFDIS	2025-06
IEC 60216-1 ED7	Electrical insulating materials - Thermal endurance properties - Part 1: Ageing procedures and evaluation of test results	112/655/CDV	CCDV	PRVC	2025-11
IEC 60216-4 ED3	Electrical insulating materials - Thermal endurance properties - Part 4: Ageing ovens	112/667/RR	ACD	CD	2028-05
IEC TS 60216-7-1 ED2	Electrical insulation materials - Thermal endurance properties - Part 7-1: Accelerated determination of relative thermal endurance using analytical test methods (RTEA) - Instructions for calculations based on activation energy	112/508/RR	ACD	CD	2025-12
IEC 60243-2 ED4	Electric strength of insulating materials - Test methods - Part 2: Additional requirements for tests using direct voltage	112/510/RR	ACD	CD	2026-01
IEC 60343-1 ED1	Recommended test methods for determining the relative resistance of insulating materials to breakdown by surface discharges - Part 1: General methods	112/654/CD	ACDV	TCDV	2026-03
IEC 60544-2 ED4	Electrical insulating materials - Determination of the effects of ionizing radiation on insulating materials - Part 2: Procedures for irradiation and test	112/665/RR	ACD	CD	2028-01
IEC 60544-4 ED3	Electrical insulating materials - Determination of the effects of ionizing radiation - Part 4: Classification system for service in radiation environments	112/592/RR	ACD	CD	2026-03
IEC TS 61244-1 ED3	Determination of long-term radiation ageing in polymers - Part 1: Techniques for monitoring diffusion-limited oxidation	112/666/RR	ACD	CD	2027-06
IEC TS 61251-2 ED1	Electrical insulating materials and systems - Part 2: DC voltage endurance evaluation	112/628/NP	ACD		2027-03
IEC 61621 ED2	Dry, solid insulating materials - Resistance test to high-voltage, low-current arc discharges	112/593/RR	ACD	CD	2026-03

IEC TR 61857-2 ED2	Electrical insulation systems - Procedures for thermal evaluation - Part 2: Selection of the appropriate test method for evaluation and classification of electrical insulation systems	112/642/CD	RDTR	CDTR	2025-05
IEC TS 61857-42 ED1	Electrical insulation systems - Procedures for thermal evaluation - Part 42: Specific requirements for evaluation of an electrical insulation system (EIS) used for road transportation applications	112/636/CD	RDTS	CDTS	2025-04
IEC TS 62332-1 ED3	Electrical insulation systems (EIS) - Thermal evaluation of combined liquid and solid components - Part 1: General requirements	112/638/RR	ACD	CD	2025-12
IEC TS 62332-2 ED2	Electrical insulation systems (EIS) - Thermal evaluation of combined liquid and solid components - Part 2: Simplified test	112/639/RR	ACD	CD	2026-02
IEC 62539 ED2	Guide for the statistical analysis of electrical insulation breakdown data	112/594/RR	ACD	CD	2027-01
IEC 62631-1 ED2	Dielectric and resistive properties of solid insulating materials - Part 1: General	112/509/RR	ACD	CD	2026-01
IEC 62631-2-1 ED2	Dielectric and resistive properties of solid insulating materials - Part 2-1: Relative permittivity and dissipation factor - Technical Frequencies (0,1 Hz - 10 MHz) - AC Methods	112/514/RR	ACD	CD	2026-01
IEC 63600 ED1	Evaluation of hydrophobicity retention of polymeric insulating materials under high voltage stress with the dynamic drop test	112/644/NP	ACD	CD	2027-08

ANNEX 12

Details of Balloting done since last ETD 02 Sectional Committee Meeting

IEC TC 15

Document No	Last Date	Vote
TC 15/1034/CDV	18-10-2024	Voted in Favor with Comments

IEC TC 112

Document No	Last Date	Vote
TC 112/654/CD	20-09-2024	Comments Sent

ANNEX 13

TC15 Publications	
Reference	**Title**
IEC 60371-1:2003	Specification for insulating materials based on mica - Part 1: Definitions and general requirements
IEC 60371-2:2004	Specification for insulating materials based on mica - Part 2: Methods of test
IEC 60371-3-1:2006	Specification for insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 1: Commutator separators and materials
IEC 60371-3-2:2005	Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 2: Mica paper
IEC 60371-3-3:1983	Specification for insulating materials based on mica. Part 3: Specifications for individual materials. Sheet 3: Rigid mica materials for heating equipment
IEC 60371-3-4:1992	Specification for insulating materials based on mica - Part 3: Specification for individual materials - Sheet 4: Polyester film-backed mica paper with a B-stage epoxy resin binder
IEC 60371-3-4:1992/AMD1:2006	Amendment 1 - Specification for insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 4: Polyester film-backed mica paper with a B-stage epoxy resin binder
IEC 60371-3-5:2005	Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 5: Glass-backed mica paper with an epoxy resin binder for post-impregnation (VPI)
IEC 60371-3-6:1992	Specification for insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 6: Glass-backed mica paper with a B-stage epoxy resin binder
IEC 60371-3-6:1992/AMD1:2006	Amendment 1 - Specification for insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 6: Glass-backed mica paper with a B-stage epoxy resin binder
IEC 60371-3-7:1995	Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 7: Polyester film mica paper with an epoxy resin binder for single conductor taping
IEC 60371-3-7:1995/COR1:1995	Corrigendum 1 - Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 7: Polyester film mica paper with an epoxy resin binder for single conductor taping
IEC 60371-3-7:1995/AMD1:2006	Amendment 1 - Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 7: Polyester film mica paper with an epoxy resin binder for single conductor taping
IEC 60371-3-8:1995	Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 8: Mica paper tapes for flame-resistant security cables
IEC 60371-3-8:1995/COR1:1995	Corrigendum 1 - Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 8: Mica paper tapes for flame-resistant security cables
IEC 60371-3-8:1995/AMD1:2007	Amendment 1 - Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 8: Mica paper tapes for flamme-resistant security cables
IEC 60371-3-9:1995	Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 9: Moulding micanite
IEC 60371-3-9:1995/COR1:1995	Corrigendum 1 - Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 9: Moulding micanite
IEC 60371-3-9:1995/AMD1:2007	Amendment 1 - Insulating materials based on mica - Part 3: Specifications for individual materials - Sheet 9: Moulding micanite
IEC 60394-1:1972	Varnished fabrics for electrical purposes. Part 1: Definitions and general requirements
IEC 60394-2:1972	Varnished fabrics for electrical purposes. Part 2: Methods of test

IEC 60394-3-1:1976	Varnished fabrics for electrical purposes. Part 3-1: Specifications for individual materials. Oleoresinous varnish-cotton base, OR/C
IEC 60394-3-2:1988	Varnished fabrics for electrical purposes. Part 3: Specifications for individual materials. Sheet 2: Glass-fabric based varnished fabrics with epoxy, polyuréthane, silicone, polyester, bituminous or oleoresinous varnish
IEC 60454-1:1992	Specifications for pressure-sensitive adhesive tapes for electrical purposes - Part 1: General requirements
IEC 60454-2:2007	Pressure-sensitive adhesive tapes for electrical purposes - Part 2: Methods of test
IEC 60454-2:2007/COR1:2009	Corrigendum 1 - Pressure-sensitive adhesive tapes for electrical purposes - Part 2: Methods of test
IEC 60454-3-1:1998+AMD1:2001 CSV	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: PVC film tapes with pressure-sensitive adhesive
IEC 60454-3-1:1998	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: PVC film tapes with pressure-sensitive adhesive
IEC 60454-3-1:1998/AMD1:2001	Amendment 1 - Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: PVC film tapes with pressure-sensitive adhesive
IEC 60454-3-2:2006	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 2: Requirements for polyester film tapes with rubber thermosetting, rubber thermoplastic or acrylic crosslinked adhesives
IEC 60454-3-4:2007	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 4: Cellulose paper, creped and non-creped, with rubber thermosetting adhesive
IEC 60454-3-7:1998	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 7: Polyimide film tapes with pressure-sensitive adhesive
IEC 60454-3-8:2006	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 8 - Woven fabric tapes with pressure-sensitive adhesive based on glass, cellulose acetate alone or combined with viscose fibre
IEC 60454-3-11:2007	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 11: Polyester film combinations with glass filament, creped cellulosic paper, polyester non-woven, epoxy and pressure-sensitive adhesive
IEC 60454-3-12:2006	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 12: Requirements for polyethylene and polypropylene film tapes with pressure sensitive adhesive
IEC 60454-3-14:2001	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 14: Polytetrafluoroethylene film tapes with pressure-sensitive adhesive
IEC 60454-3-19:2003	Pressure-sensitive adhesive tapes for electrical purposes - Part 3: Specifications for individual materials - Sheet 19: Tapes made from various backing materials with pressure-sensitive adhesive on both sides
IEC 60455-1:1998	Resin based reactive compounds used for electrical insulation - Part 1: Definitions and general requirements
IEC 60455-2:2023 RLV	Resin based reactive compounds used for electrical insulation - Part 2: Methods of test
IEC 60455-2:2023	Resin based reactive compounds used for electrical insulation - Part 2: Methods of test
IEC 60455-2-2:1984	Specification for solventless polymerisable resinous compounds used for electrical insulation - Part 2-2: Methods of test - Test methods for coating powders for electrical purposes

IEC 60455-2-2:1984/COR1:1991	Corrigendum 1 - Specification for solventless polymerisable resinous compounds used for electrical insulation - Part 2: Methods of test - Test methods for coating powders for electrical purposes
IEC 60455-3-1:2003	Resin based reactive compounds used for electrical insulation - Part 3: Specifications for individual materials - Sheet 1: Unfilled epoxy resinous compounds
IEC 60455-3-2:2003	Resin based reactive compounds used for electrical insulation - Part 3: Specifications for individual materials - Sheet 2: Quartz filled epoxy resinous compounds
IEC 60455-3-3:2003	Resin based reactive compounds used for electrical insulation - Part 3: Specifications for individual materials - Sheet 3: Unfilled polyurethane compounds
IEC 60455-3-4:2003	Resin based reactive compounds used for electrical insulation - Part 3: Specifications for individual materials - Sheet 4: Filled polyurethane compounds
IEC 60455-3-5:2006	Resin based reactive compounds used for electrical insulation - Part 3: Specifications for individual materials - Sheet 5: Unsaturated polyester based impregnating resins
IEC 60455-3-8:2021 RLV	Resin based reactive compounds used for electrical insulation - Part 3-8: Specifications for individual materials - Resins for cable accessories
IEC 60455-3-8:2021	Resin based reactive compounds used for electrical insulation - Part 3-8: Specifications for individual materials - Resins for cable accessories
IEC 60455-3-11:1988	Specification for solventless polymerisable resinous compounds used for electrical insulation. Part 3: Specifications for individual materials. Sheet 11: Epoxy resin-based coating powders
IEC 60464-1:1998+AMD1:2006 CSV	Varnishes used for electrical insulation - Part 1: Definitions and general requirements
IEC 60464-1:1998	Varnishes used for electrical insulation - Part 1: Definitions and general requirements
IEC 60464-1:1998/AMD1:2006	Amendment 1 - Varnishes used for electrical insulation - Part 1: Definitions and general requirements
IEC 60464-2:2001+AMD1:2006 CSV	Varnishes used for electrical insulation - Part 2: Methods of test
IEC 60464-2:2001	Varnishes used for electrical insulation - Part 2: Methods of test
IEC 60464-2:2001/AMD1:2006	Amendment 1 - Varnishes used for electrical insulation - Part 2: Methods of test
IEC 60464-3-1:2001+AMD1:2006 CSV	Varnishes used for electrical insulation - Part 3: Specificationsfor individual materials - Sheet 1: Ambient curing finishing varnishes
IEC 60464-3-1:2001	Varnishes used for electrical insulation - Part 3: Specifications for individual materials - Sheet 1: Ambient curing finishing varnishes
IEC 60464-3-1:2001/AMD1:2006	Amendment 1 - Varnishes used for electrical insulation - Part 3: Specifications for individual materials - Sheet 1: Ambient curing finishing varnishes
IEC 60464-3-2:2001+AMD1:2006 CSV	Varnishes used for electrical insulation - Part 3: Specificationsfor individual materials - Sheet 2: Hot curing impregnating varnishes
IEC 60464-3-2:2001	Varnishes used for electrical insulation - Part 3: Specifications for individual materials - Sheet 2: Hot curing impregnating varnishes
IEC 60464-3-2:2001/AMD1:2006	Amendment 1 - Varnishes used for electrical insulation - Part 3: Specifications for individual materials - Sheet 2: Hot curing impregnating varnishes
IEC 60554-1:1977	Specification for cellulosic papers for electrical purposes. Part 1: Definitions and general requirements
IEC 60554-1:1977/COR1:1979	Corrigendum 1 - Specification for cellulosic papers for electrical purposes. Part 1: Definitions and general requirements

IEC 60554-1:1977/AMD1:1983	Amendment 1 - Specification for cellulosic papers for electrical purposes. Part 1: Definitions and general requirements
IEC 60554-2:2001	Cellulosic papers for electrical purposes - Part 2: Methods of test
IEC 60554-3-1:1979	Specification for cellulosic papers for electrical purposes. Part 3-1: Specifications for individual materials. General purpose electrical paper
IEC 60554-3-2:1983	Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 2: Capacitor paper
IEC 60554-3-3:1980	Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 3: Crêpe paper
IEC 60554-3-4:1979	Specification for cellulosic papers for electrical purposes. Part 3-4: Specifications for individual materials. Electrolytic capacitor paper
IEC 60554-3-5:1984	Specification for cellulosic papers for electrical purposes. Part 3: Specifications for individual materials. Sheet 5: Special papers
IEC 60589:1977/COR1:1978	Corrigendum 1 - Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids
IEC 60626-1:2023 RLV	Combined flexible materials for electrical insulation - Part 1: Definitions and general requirements
IEC 60626-1:2023	Combined flexible materials for electrical insulation - Part 1: Definitions and general requirements
IEC 60626-2:2009	Combined flexible materials for electrical insulation - Part 2: Methods of test
IEC 60626-3:2008+AMD1:2012 CSV	Combined flexible materials for electrical insulation - Part 3:Specifications for individual materials
IEC 60626-3:2008	Combined flexible materials for electrical insulation - Part 3: Specifications for individual materials
IEC 60626-3:2008/AMD1:2012	Amendment 1 - Combined flexible materials for electrical insulation - Part 3: Specifications for individual materials
IEC 60641-1:2007	Pressboard and presspaper for electrical purposes - Part 1: Definitions and general requirements
IEC 60641-2:2004	Pressboard and presspaper for electrical purposes - Part 2: Methods of tests
IEC 60641-3-1:2008	Pressboard and presspaper for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Requirements for pressboard, types B.0.1, B.0.3, B.2.1, B.2.3, B.3.1, B.3.3, B.4.1, B.4.3, B.5.1, B.5.3 and B.6.1
IEC 60641-3-2:2007	Pressboard and presspaper for electrical purposes - Part 3: Specifications for individual materials - Sheet 2: Requirements for presspaper, types P.2.1, P.4.1, P.4.2, P.4.3 and P.6.1
IEC 60667-1:2020	Vulcanized fibre for electrical purposes - Part 1: Definitions and general requirements
IEC 60667-2:2020	Vulcanized fibre for electrical purposes - Part 2: Methods of test
IEC 60667-3-1:2020	Vulcanized fibre for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Flat sheets
IEC 60672-1:1995	Ceramic and glass insulating materials - Part 1: Definitions and classification
IEC 60672-2:1999	Ceramic and glass insulating materials - Part 2: Methods of test
IEC 60672-3:1997	Ceramic and glass-insulating materials - Part 3: Specifications for individual materials
IEC 60674-1:1980	Specification for plastic films for electrical purposes. Part 1: Definitions and general requirements
IEC 60674-2:2016+AMD1:2019 CSV	Specification for plastic films for electrical purposes - Part 2: Methods of test
IEC 60674-2:2016	Specification for plastic films for electrical purposes - Part 2: Methods of test
IEC 60674-2:2016/COR1:2017	Corrigendum 1 - Specification for plastic films for electrical purposes - Part 2: Methods of test

IEC 60674-2:2016/AMD1:2019	Amendment 1 - Specification for plastic films for electrical purposes - Part 2: Methods of test
IEC 60674-3-1:2021 RLV	Plastic films for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Biaxially oriented polypropylene (PP) films for capacitors
IEC 60674-3-1:2021	Plastic films for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Biaxially oriented polypropylene (PP) films for capacitors
IEC 60674-3-2:2019	Specification for plastic films for electrical purposes - Part 3: Specifications for individual materials - Sheet 2: Requirements for balanced biaxially oriented polyethylene terephthalate (PET) films used for electrical insulation
IEC 60674-3-3:2023	Plastic films for electrical purposes - Part 3:Specifications for individual materials - Sheet 3: Polycarbonate (PC) films used for electrical insulation
IEC 60674-3-4:2022	Plastic films for electrical purposes - Part 3: Specifications for individual materials - Sheets 4: Polyimide films used for electrical insulation
IEC 60674-3-7:2023	Plastic films for electrical purposes - Part 3: Specifications for individual materials – Sheet 7: Fluoroethylene-propylene (FEP) films used for electrical insulation
IEC 60674-3-8:2011+AMD1:2016 CSV	Plastic films for electrical purposes - Part 3: Specifications for individual materials - Sheet 8: Balanced biaxially oriented polyethylene naphthalate (PEN) films used for electrical insulation
IEC 60674-3-8:2011	Plastic films for electrical purposes - Part 3: Specifications for individual materials - Sheet 8: Balanced biaxially oriented polyethylene naphthalate (PEN) films used for electrical insulation
IEC 60674-3-8:2011/AMD1:2016	Amendment 1 - Plastic films for electrical purposes - Part 3: Specifications for individual materials - Sheet 8: Balanced biaxially oriented polyethylene naphthalate (PEN) films used for electrical insulation
IEC 60684-1:2003	Flexible insulating sleeving - Part 1: Definitions and general requirements
IEC 60684-2:2011	Flexible insulating sleeving - Part 2: Methods of test
IEC 60684-3-100:2001	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 100 to 105: Extruded PVC sleeving
IEC 60684-3-116:2024 RLV	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 116 and 117: Extruded polychloroprene, general purpose
IEC 60684-3-116:2024	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 116 and 117: Extruded polychloroprene, general purpose
IEC 60684-3-121:2001	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 121 to 124: Extruded silicone sleeving
IEC 60684-3-136:1997	Flexible insulating sleeving - Part 3: Specification for individual types of sleeving - Sheet 136: Extruded fluorosilicone sleeving - General purpose
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IEC 60684-3-145:2001	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 145 to 147: Extruded PTFE sleeving
IEC 60684-3-151:1998	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 151: Extruded PVC/nitrile rubber - General purpose
IEC 60684-3-165:2004	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 165: Extruded polyolefin, flame retarded, limited fire hazard sleeving
IEC 60684-3-205:2011	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 205: Heat-shrinkable chlorinated polyolefin sleeving, flame retarded, nominal shrink ratio 1,7:1 and 2:1

IEC 60684-3-209:2010	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 209: Heat-shrinkable, polyolefin sleeving, general purpose, flame retarded
IEC 60684-3-211:2007	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 211: Heat-shrinkable sleeving, semi-rigid polyolefin, shrink ratio 2:1
IEC 60684-3-212:2005	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 212: Heat-shrinkable polyolefin sleevings
IEC 60684-3-214:2019	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 214: Heat-shrinkable, polyolefin sleeving, not flame retarded, thick and medium wall
IEC 60684-3-214:2019 RLV	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 214: Heat-shrinkable, polyolefin sleeving, not flame retarded, thick and medium wall
IEC 60684-3-216:2019 RLV	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 216: Heat-shrinkable, flame- retarded, limited-fire-hazard sleeving
IEC 60684-3-216:2019	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 216: Heat-shrinkable, flame- retarded, limited-fire-hazard sleeving
IEC 60684-3-228:2004	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 228: Heat-shrinkable, semi-rigid polyvinylidene fluoride sleeving, flame retarded, fluid resistant, shrink ratio 2:1
IEC 60684-3-229:2003	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 229: Heat-shrinkable semi-flexible, polyvinylidene fluoride sleeving, flame retarded, fluid resistant, shrink ratio 2:1
IEC 60684-3-233:2006	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 233: Heat-shrinkable fluoroelastomer sleeving, flame retarded, fluid resistant, shrink ratio 2:1
IEC 60684-3-240:2002	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 240 to 243: Heat-shrinkable PTFE sleeving
IEC 60684-3-246:2007	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 246: Heat-shrinkable polyolefin sleeving, dual wall, non-flame retarded
IEC 60684-3-247:2019 RLV	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 247: Heat-shrinkable, polyolefin sleeving, dual wall, not flame retarded, thick and medium wall
IEC 60684-3-247:2019	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 247: Heat-shrinkable, polyolefin sleeving, dual wall, not flame retarded, thick and medium wall
IEC 60684-3-248:2007	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 248: General purpose, heat-shrinkable, dual wall polyolefin sleeving, flame retarded, shrink ratios 2:1, 3:1, 4:1
IEC 60684-3-271:2011	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 271: Heat-shrinkable elastomer sleevings, flame retarded, fluid resistant, shrink ratio 2:1
IEC 60684-3-280:2019 RLV	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 280: Heat-shrinkable, polyolefin sleeving, anti-tracking
IEC 60684-3-280:2019	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 280: Heat-shrinkable, polyolefin sleeving, anti-tracking
IEC 60684-3-281:2010	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 281: Heat-shrinkable, polyolefin sleeving, semiconductive
IEC 60684-3-282:2010	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 282: Heat-shrinkable, polyolefin sleeving - Stress control

IEC 60684-3-283:2019 RLV	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 283: Heat-shrinkable, polyolefin sleeving for bus-bar insulation
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IEC 60684-3-300:2002	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 300: Glass textile fibre sleeving, braided, uncoated
IEC 60684-3-320:2002	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 320: Polyethylene terephthalate textile sleeving, lightly impregnated
IEC 60684-3-340:2003	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 340 to 342: Expandable braided polyethylene terephthalate textile sleeving
IEC 60684-3-343:2002	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 343 to 345: Expandable braided ethylene chlorotrifluoroethylene (E-CTFE) textile sleeving, uncoated
IEC 60684-3-400:2002	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 400 to 402: Glass textile sleeving with silicone elastomer coating
IEC 60684-3-403:2002	Flexible insulating sleeving - Part 3: Specification for individual types of sleeving - Sheets 403 to 405: Glass textile sleeving with acrylic based coating
IEC 60684-3-406:2003	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheets 406 to 408: Glass textile sleeving with PVC coating
IEC 60684-3-409:1999	Flexible insulating sleeving - Part 3: Specifications for individual types of sleeving - Sheet 409: Glass textile sleeving with polyurethane (PUR)-based coating
IEC 60684-3-420:2002	Flexible insulating sleeving - Part 3: Specification for individual types of sleeving - Sheets 420 to 422: Polyethylene terephthalate textile sleeving with acrylic based coating
IEC 60763-1:2010	Laminated pressboard for electrical purposes - Part 1: Definitions, classification and general requirements
IEC 60763-2:2007+AMD1:2023 CSV	Specification for laminated pressboard - Part 2: Methods of test
IEC 60763-2:2007	Specification for laminated pressboard - Part 2: Methods of test
IEC 60763-2:2007/AMD1:2023	Amendment 1 - Specification for laminated pressboard - Part 2: Methods of test
IEC 60763-3-1:2010	Laminated pressboard for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Requirements for laminated pre-compressed pressboard, Types LB3.1A.1 and LB3.1A.2
IEC 60819-1:2009	Non-cellulosic papers for electrical purposes - Part 1: Definitions and general requirements
IEC 60819-2:2001	Non-cellulosic papers for electrical purposes - Part 2: Methods of test
IEC 60819-3-1:2001	Non-cellulosic papers for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Filled glass paper
IEC 60819-3-2:2001	Non-cellulosic papers for electrical purposes - Part 3: Specifications for individual materials - Sheet 2: Hybrid inorganic-organic paper
IEC 60819-3-3:2011	Non-cellulosic papers for electrical purposes - Part 3: Specifications for individual materials - Sheet 3: Unfilled aramid (aromatic polyamide) papers
IEC 60819-3-4:2013	Non-cellulosic papers for electrical purposes - Part 3: Specifications for individual materials - Sheet 4: Aramid fibre paper containing not more than 50 % of mica particles

IEC 60893-1:2004	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 1: Definitions, designations and general requirements
IEC 60893-2:2023 RLV	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 2: Methods of test
IEC 60893-2:2023	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 2: Methods of test
IEC 60893-3-1:2012	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-1: Specifications for individual materials - Types of industrial rigid laminated sheets
IEC 60893-3-2:2003+AMD1:2011 CSV	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-2: Specifications for individual materials - Requirements for rigid laminated sheets based on epoxy resins
IEC 60893-3-2:2003	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-2: Specifications for individual materials - Requirements for rigid laminated sheets based on epoxy resins
IEC 60893-3-2:2003/AMD1:2011	Amendment 1 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-2: Specifications for individual materials - Requirements for rigid laminated sheets based on epoxy resins
IEC 60893-3-3:2003+AMD1:2011 CSV	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-3: Specifications for individual materials - Requirements for rigid laminated sheets based on melamine resins
IEC 60893-3-3:2003	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-3: Specifications for individual materials - Requirements for rigid laminated sheets based on melamine resins
IEC 60893-3-3:2003/AMD1:2011	Amendment 1 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-3: Specifications for individual materials - Requirements for rigid laminated sheets based on melamine resins
IEC 60893-3-4:2003+AMD1:2012 CSV	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-4: Specifications for individual materials - Requirements for rigid laminated sheets based on phenolic resins
IEC 60893-3-4:2003	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-4: Specifications for individual materials - Requirements for rigid laminated sheets based on phenolic resins
IEC 60893-3-4:2003/COR1:2014	Corrigendum 1 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-4: Specifications for individual materials - Requirements for rigid laminated sheets based on phenolic resins
IEC 60893-3-4:2003/AMD1:2012	Amendment 1 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-4: Specifications for individual materials - Requirements for rigid laminated sheets based on phenolic resins
IEC 60893-3-5:2003+AMD1:2009 CSV	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-5: Specifications for individual materials - Requirements for rigid laminated sheets based on polyester resins
IEC 60893-3-5:2003	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-5: Specifications for individual materials - Requirements for rigid laminated sheets based on polyester resins
IEC 60893-3-5:2003/AMD1:2009	Amendment 1 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-5: Specifications for individual materials - Requirements for rigid laminated sheets based on polyester resins

IEC 60893-3-6:2003+AMD1:2009+AMD2:2017 CSV	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-6: Specifications for individual materials - Requirements for rigid laminated sheets based on silicone resins
IEC 60893-3-6:2003+AMD1:2009 CSV	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-6: Specifications for individual materials - Requirements for rigid laminated sheets based on silicone resins
IEC 60893-3-6:2003	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-6: Specifications for individual materials - Requirements for rigid laminated sheets based on silicone resins
IEC 60893-3-6:2003/AMD1:2009	Amendment 1 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-6: Specifications for individual materials - Requirements for rigid laminated sheets based on silicone resins
IEC 60893-3-6:2003/AMD2:2017	Amendment 2 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-6: Specifications for individual materials - Requirements for rigid laminated sheets based on silicone resins
IEC 60893-3-7:2003+AMD1:2009 CSV	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-7: Specifications for individual materials - Requirements for rigid laminated sheets based on polyimide resins
IEC 60893-3-7:2003	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-7: Specifications for individual materials - Requirements for rigid laminated sheets based on polyimide resins
IEC 60893-3-7:2003/AMD1:2009	Amendment 1 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 3-7: Specifications for individual materials - Requirements for rigid laminated sheets based on polyimide resins
IEC TR 60893-4:2014+AMD1:2017 CSV	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 4: Typical values
IEC TR 60893-4:2014	Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 4: Typical values
IEC TR 60893-4:2014/AMD1:2017	Amendment 1 - Insulating materials - Industrial rigid laminated sheets based on thermosetting resins for electrical purposes - Part 4: Typical values
IEC 61033:1991	Test methods for the determination of bond strength of impregnating agents to an enamelled wire substrate
IEC 61033:1991/AMD1:2006	Amendment 1 - Test methods for the determination of bond strength of impregnating agents to an enamelled wire substrate
IEC 61061-1:2006	Non-impregnated densified laminated wood for electrical purposes - Part 1: Definitions, designation and general requirements
IEC 61061-2:1992+AMD1:2001 CSV	Specification for non-impregnated, densified laminated wood for electrical purposes - Part 2: Methods of test
IEC 61061-2:1992	Specification for non-impregnated, densified laminated wood for electrical purposes - Part 2: Methods of test
IEC 61061-2:1992/AMD1:2001	Amendment 1 - Specification for non-impregnated, densified laminated wood for electrical purposes - Part 2: Methods of test
IEC 61061-3-1:1998	Non-impregnated densified laminated wood for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Sheets produced from beech veneer
IEC 61061-3-2:2001	Non-impregnated densified laminated wood for electrical purposes - Part 3: Specifications for individual materials - Sheet 2: Rings produced from beech veneer
IEC 61067-1:1991	Specification for glass and glass polyester fibre woven tapes - Part 1: Definitions, classification and general requirements

IEC 61067-2:1992	Specification for glass and glass polyester fibre woven tapes - Part 2: Methods of test
IEC 61067-3-1:1995	Glass and glass polyester fibre woven tapes - Part 3: Specifications for individual materials - Sheet 1: Type 1, 2 and 3 tapes
IEC 61068-1:1991	Specification for polyester fibre woven tapes - Part 1: Definitions, designation and general requirements
IEC 61068-2:1991	Specification for polyester fibre woven tapes - Part 2: Methods of test
IEC 61068-3-1:1995	Polyester fibre woven tapes - Part 3: Specifications for individual materials - Sheet 1: Tapes woven on conventional or shuttleless looms
IEC 61068-3-1:1995/COR1:1998	Corrigendum 1 - Polyester fibre woven tapes - Part 3: Specifications for individual materials - Sheet 1: Tapes woven on conventional or shuttleless looms
IEC 61086-1:2004	Coatings for loaded printed wire boards (conformal coatings) - Part 1: Definitions, classification and general requirements
IEC 61086-2:2004	Coatings for loaded printed wire boards (conformal coatings) - Part 2: Methods of test
IEC 61086-2:2004/COR1:2005	Corrigendum 1 - Coatings for loaded printed wire boards (conformal coatings) - Part 2: Methods of test
IEC 61086-3-1:2004	Coatings for loaded printed wire boards (conformal coatings) - Part 3-1: Specifications for individual materials - Coatings for general purpose (Class 1), high reliability (Class 2) and aerospace (Class 3)
IEC 61212-1:2006	Insulating materials - Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes - Part 1: Definitions, designations and general requirements
IEC 61212-1:2006/COR1:2014	Corrigendum 1 - Insulating materials - Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes - Part 1: Definitions, designations and general requirements
IEC 61212-2:2006	Insulating materials - Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes - Part 2: Methods of test
IEC 61212-3-1:2013	Insulating materials - Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Round laminated rolled tubes
IEC 61212-3-2:2013	Insulating materials - Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes - Part 3: Specifications for individual materials - Sheet 2: Round laminated moulded tubes
IEC 61212-3-3:2006	Insulating materials - Industrial rigid round laminated tubes and rods based on thermosetting resins for electrical purposes - Part 3: Specifications for individual materials - Sheet 3: Round laminated moulded rods
IEC 61628-1:1997	Corrugated pressboard and presspaper for electrical purposes - Part 1: Definitions, designations and general requirements
IEC 61628-2:1998+AMD1:2007 CSV	Corrugated pressboard and presspaper for electrical purposes - Part 2: Methods of test
IEC 61628-2:1998	Corrugated pressboard and presspaper for electrical purposes - Part 2: Methods of test
IEC 61628-2:1998/AMD1:2007	Amendment 1 - Corrugated pressboard and presspaper for electrical purposes - Part 2: Methods of test
IEC 61629-1:1996	Aramid pressboard for electrical purposes - Part 1: Definitions, designations and general requirements
IEC 61629-2:1996	Aramid pressboard for electrical purposes - Part 2: Methods of test

IEC 62011-1:2002	Insulating materials - Industrial, rigid, moulded, laminated tubes and rods of rectangular and hexagonal cross-section based on thermosetting resins for electrical purposes - Part 1: Definitions, designations and general requirements
IEC 62011-2:2004	Insulating materials - Industrial, rigid, moulded, laminated tubes and rods of rectangular and hexagonal cross-section, based on thermosetting resins for electrical purposes - Part 2: Methods of test
IEC 62011-3-1:2003	Insulating materials - Industrial rigid moulded laminated tubes and rods of rectangular and hexagonal cross-section based on thermosetting resins for electrical purposes - Part 3-1: Specifications for individual materials - Tubes and rods of rectangular and hexagonal cross-section
IEC 62329-1:2005	Heat shrinkable moulded shapes - Part 1: Definitions and general requirements
IEC 62329-2:2006	Heat-shrinkable moulded shapes - Part 2: Methods of test
IEC 62329-3-100:2010	Heat-shrinkable moulded shapes - Part 3: Specification requirements for shape dimensions, material requirements and compatibility performance - Sheet 100: Heat-shrinkable moulded shape dimensions
IEC 62329-3-101:2010	Heat-shrinkable moulded shapes - Part 3: Specification requirements for shape dimensions, material requirements and compatibility performance - Sheet 101: Heat-shrinkable moulded shapes, polyolefin, semi-rigid, limited fire hazard, material requirements and system performance
IEC 62329-3-102:2010	Heat-shrinkable moulded shapes - Part 3: Specification requirements for shape dimensions, material requirements and compatibility performance - Sheet 102: Heat-shrinkable elastomeric moulded shapes, semi-rigid, material requirements and system performance
IEC TR 62422:2007	Environmental characterization of solid insulating materials
IEC 62677-1:2017	Heat shrinkable low and medium voltage moulded shapes - Part 1: General requirements
IEC 62677-2:2017	Heat shrinkable low and medium voltage moulded shapes - Part 2: Methods of test
IEC 62677-3-101:2018	Heat-shrinkable low and medium voltage moulded shapes - Part 3: Specification for individual materials - Sheet 101: Heat-shrinkable, polyolefin moulded shapes for low voltage applications
IEC 62677-3-102:2018	Heat-shrinkable low and medium voltage moulded shapes - Part 3: Specification for individual materials - Sheet 102: Heat-shrinkable, polyolefin, anti-tracking moulded shapes for medium voltage applications
IEC 62677-3-103:2019	Heat-shrinkable low and medium voltage moulded shapes - Part 3: Specification for individual materials - Sheet 103: Heat-shrinkable, polyolefin, conductive moulded shapes for medium voltage applications

TC112 Publications	
Reference	**Title**
IEC 60085:2007	Electrical insulation - Thermal evaluation and designation
IEC 60112:2020 CMV	Method for the determination of the proof and the comparative tracking indices of solid insulating materials
IEC 60112:2020	Method for the determination of the proof and the comparative tracking indices of solid insulating materials
IEC 60212:2010	Standard conditions for use prior to and during the testing of solid electrical insulating materials
IEC 60216-1:2013	Electrical insulating materials - Thermal endurance properties - Part 1: Ageing procedures and evaluation of test results
IEC 60216-2:2005	Electrical insulating materials - Thermal endurance properties - Part 2: Determination of thermal endurance properties of electrical insulating materials - Choice of test criteria
IEC 60216-2:2005/COR1:2024	Corrigendum 1 - Electrical insulating materials - Thermal endurance properties - Part 2: Determination of thermal endurance properties of electrical insulating materials - Choice of test criteria
IEC 60216-3:2021 RLV	Electrical insulating materials - Thermal endurance properties - Part 3: Instructions for calculating thermal endurance characteristics
IEC 60216-3:2021	Electrical insulating materials - Thermal endurance properties - Part 3: Instructions for calculating thermal endurance characteristics
IEC 60216-4-1:2006	Electrical insulating materials - Thermal endurance properties - Part 4-1: Ageing ovens - Single-chamber ovens
IEC 60216-4-2:2000	Electrical insulating materials - Thermal endurance properties - Part 4-2: Ageing ovens - Precision ovens for use up to 300 °C
IEC 60216-4-3:2000	Electrical insulating materials - Thermal endurance properties - Part 4-3: Ageing ovens - Multi-chamber ovens
IEC 60216-5:2022	Electrical insulating materials - Thermal endurance properties - Part 5: Determination of relative temperature index (RTI) of an insulating material
IEC 60216-5:2022 CMV	Electrical insulating materials - Thermal endurance properties - Part 5: Determination of relative temperature index (RTI) of an insulating material
IEC 60216-6:2022 RLV	Electrical insulating materials - Thermal endurance properties - Part 6: Determination of thermal endurance indices (TI and RTI) of an insulating material using the fixed time frame method
IEC 60216-6:2022	Electrical insulating materials - Thermal endurance properties - Part 6: Determination of thermal endurance indices (TI and RTI) of an insulating material using the fixed time frame method
IEC TS 60216-7-1:2015	Electrical insulation materials - Thermal endurance properties - Part 7-1: Accelerated determination of relative thermal endurance using analytical test methods (RTEA) - Instructions for calculations based on activation energy
IEC TR 60216-7-2:2024 RLV	Electrical insulating materials - Thermal endurance properties - Part 7-2: Accelerated determination of relative thermal endurance using analytical test methods (RTEA) - Results of the round robin tests to validate procedures of IEC TS 60216-7-1 by non-isothermal kinetic analysis of thermogravimetric data

IEC TR 60216-7-2:2024	Electrical insulating materials - Thermal endurance properties - Part 7-2: Accelerated determination of relative thermal endurance using analytical test methods (RTEA) - Results of the round robin tests to validate procedures of IEC TS 60216-7-1 by non-isothermal kinetic analysis of thermogravimetric data
IEC 60216-8:2013	Electrical insulating materials - Thermal endurance properties - Part 8: Instructions for calculating thermal endurance characteristics using simplified procedures
IEC 60243-1:2013	Electric strength of insulating materials - Test methods - Part 1: Tests at power frequencies
IEC 60243-2:2013	Electric strength of insulating materials - Test methods - Part 2: Additional requirements for tests using direct voltage
IEC 60243-3:2013	Electric strength of insulating materials - Test methods - Part 3: Additional requirements for 1,2/50 µs impulse tests
IEC 60343:1991	Recommended test methods for determining the relative resistance of insulating materials to breakdown by surface discharges
IEC 60370:2017	Test procedure for thermal endurance of insulating resins and varnishes for impregnation purposes - Electric breakdown methods
IEC 60377-1:1973	Methods for the determination of the dielectric properties of insulating materials at frequencies above 300 MHz. Part 1: General
IEC 60377-2:1977	Methods for the determination of the dielectric properties of insulating materials at frequencies above 300 MHz. Part 2: Resonance methods
IEC 60426:2007	Electrical insulating materials - Determination of electrolytic corrosion caused by insulating materials - Test methods
IEC 60450:2004+AMD1:2007 CSV	Measurement of the average viscometric degree of polymerization of new and aged cellulosic electrically insulating materials
IEC 60450:2004	Measurement of the average viscometric degree of polymerization of new and aged cellulosic electrically insulating materials
IEC 60450:2004/AMD1:2007	Amendment 1 - Measurement of the average viscometric degree of polymerization of new and aged cellulosic electrically insulating materials
IEC 60493-1:2011	Guide for the statistical analysis of ageing test data - Part 1: Methods based on mean values of normally distributed test results
IEC TR 60493-2:2010	Guide for the statistical analysis of ageing test data - Part 2: Validation of procedures for statistical analysis of censored normally distributed data
IEC TR 60493-3:2017	Guidelines for the statistical analysis of ageing test data - Part 3: Minimum specimen numbers at different test conditions with given experimental data
IEC 60505:2011	Evaluation and qualification of electrical insulation systems
IEC 60505:2011/COR1:2017	Corrigendum 1 - Evaluation and qualification of electrical insulation systems
IEC 60544-1:2013	Electrical insulating materials - Determination of the effects of ionizing radiation - Part 1: Radiation interaction and dosimetry
IEC 60544-2:2012	Electrical insulating materials - Determination of the effects of ionizing radiation on insulating materials - Part 2: Procedures for irradiation and test
IEC 60544-4:2003	Electrical insulating materials - Determination of the effects of ionizing radiation - Part 4: Classification system for service in radiation environments
IEC 60544-5:2022 RLV	Electrical insulating materials - Determination of the effects of ionizing radiation - Part 5: Procedures for assessment of ageing in service

IEC 60544-5:2022	Electrical insulating materials - Determination of the effects of ionizing radiation - Part 5: Procedures for assessment of ageing in service
IEC 60587:2022	Electrical insulating materials used under severe ambient conditions - Test methods for evaluating resistance to tracking and erosion
IEC 60589:1977	Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids
IEC 61234-1:1994	Method of test for the hydrolytic stability of electrical insulating materials - Part 1: Plastic films
IEC 61234-2:1997	Electrical insulating materials - Methods of test for the hydrolytic stability - Part 2: Moulded thermosets
IEC TS 61244-1:2014	Determination of long-term radiation ageing in polymers - Part 1: Techniques for monitoring diffusion-limited oxidation
IEC TS 61244-2:2014	Determination of long-term radiation ageing in polymers - Part 2: Procedures for predicting ageing at low dose rates
IEC TR 61244-4:2019	Determination of long-term radiation ageing in polymers - Part 4: Effects of different temperatures and dose rates under radiation conditions
IEC 61251:2015	Electrical insulating materials and systems - AC voltage endurance evaluation
IEC 61302:1995	Electrical insulating materials - Method to evaluate the resistance to tracking and erosion - Rotating wheel dip test
IEC 61302:1995/COR1:1995	Corrigendum 1 - Electrical insulating materials - Method to evaluate the resistance to tracking and erosion - Rotating wheel dip test
IEC 61621:1997	Dry, solid insulating materials - Resistance test to high-voltage, low-current arc discharges
IEC 61857-1:2008	Electrical insulation systems - Procedures for thermal evaluation - Part 1: General requirements - Low-voltage
IEC TR 61857-2:2015	Electrical insulation systems - Procedures for thermal evaluation - Part 2: Selection of the appropriate test method for evaluation and classification of electrical insulation systems
IEC 61857-21:2009	Electrical insulation systems - Procedures for thermal evaluation - Part 21: Specific requirements for general-purpose models - Wire-wound applications
IEC 61857-22:2008	Electrical insulation systems - Procedures for thermal evaluation - Part 22: Specific requirements for encapsulated-coil model - Wire-wound electrical insulation system (EIS)
IEC 61857-31:2017	Electrical insulation systems - Procedures for thermal evaluation - Part 31: Applications with a designed life of 5 000 h or less
IEC 61857-32:2019	Electrical insulation systems - Procedures for thermal evaluation - Part 32: Multifactor evaluation with increased factors during diagnostic testing
IEC 61858-1:2014	Electrical insulation systems - Thermal evaluation of modifications to an established electrical insulation system (EIS) - Part 1: Wire-wound winding EIS
IEC 61858-2:2014	Electrical insulation systems - Thermal evaluation of modifications to an established electrical insulation system (EIS) - Part 2: Form-wound EIS
IEC TR 61858-3:2020	Electrical insulation systems - Thermal evaluation of modifications to an established electrical insulation system (EIS) - Part 3: Clarification of electrical insulating materials (EIMs) and auxiliary materials
IEC TR 62039:2021	Selection guidelines for polymeric materials for outdoor use under HV stress
IEC 62068:2013	Electrical insulating materials and systems - General method of evaluation of electrical endurance under repetitive voltage impulses
IEC TS 62332-1:2011	Electrical insulation systems (EIS) - Thermal evaluation of combined liquid and solid components - Part 1: General requirements

IEC TS 62332-2:2014	Electrical insulation systems (EIS) - Thermal evaluation of combined liquid and solid components - Part 2: Simplified test
IEC TS 62332-3:2016	Electrical insulation systems (EIS) - Thermal evaluation of combined liquid and solid components - Part 3: Hermetic motor-compressors
IEC TR 62392:2006	Suitability of typical electrical insulating material (EIM) for polymer recycling
IEC 62539:2007	Guide for the statistical analysis of electrical insulation breakdown data
IEC 62631-1:2011	Dielectric and resistive properties of solid insulating materials - Part 1: General
IEC 62631-2-1:2018	Dielectric and resistive properties of solid insulating materials - Part 2-1: Relative permittivity and dissipation factor - Technical Frequencies (0,1 Hz - 10 MHz) - AC Methods
IEC 62631-2-2:2022	Dielectric and resistive properties of solid insulating materials - Part 2-2: Relative permittivity and dissipation factor - High frequencies (1 MHz to 300 MHz) - AC methods
IEC 62631-2-3:2024	Dielectric and resistive properties of solid insulating materials - Part 2-3: Relative permittivity and dissipation factor - Contact electrode method for insulating films - AC methods
IEC 62631-3-1:2023	Dielectric and resistive properties of solid insulating materials - Part 3-1: Determination of resistive properties (DC methods) - Volume resistance and volume resistivity - General method
IEC 62631-3-1:2023 RLV	Dielectric and resistive properties of solid insulating materials - Part 3-1: Determination of resistive properties (DC methods) - Volume resistance and volume resistivity - General method
IEC 62631-3-2:2023	Dielectric and resistive properties of solid insulating materials - Part 3-2: Determination of resistive properties (DC methods) - Surface resistance and surface resistivity
IEC 62631-3-2:2023 CMV	Dielectric and resistive properties of solid insulating materials - Part 3-2: Determination of resistive properties (DC methods) - Surface resistance and surface resistivity
IEC 62631-3-3:2015	Dielectric and resistive properties of solid insulating materials - Part 3-3: Determination of resistive properties (DC methods) - Insulation resistance
IEC 62631-3-4:2019	Dielectric and resistive properties of solid insulating materials - Part 3-4: Determination of resistive properties (DC methods) - Volume resistance and volume resistivity at elevated temperatures
IEC 62631-3-11:2018	Dielectric and resistive properties of solid insulating materials - Part 3-11: Determination of resistive properties (DC Methods) - Volume resistance and volume resistivity - Method for impregnation and coating materials
IEC 62631-3-12:2024	Dielectric and resistive properties of solid insulating materials - Part 3-12: Determination of resistive properties (DC methods) - Volume resistance and volume resistivity - Method for casting resins
IEC TS 62758:2012	Calibration of space charge measuring equipment based on the pulsed electro-acoustic (PEA) measurement principle
IEC 62836:2024	Measurement of internal electric field in insulating materials - Pressure wave propagation method
IEC 63177:2024	Test methods for compatibility of construction materials with electrical insulating liquids

ANNEX 14

List of experts nominated in various working groups under IEC TC 15 and IEC TC 112

TC/SC (IEC website)	WG/PT/ MT/JWG	Membership	Titles	ETD	Member Secretary	Expert Nominated
TC 15		P	Solid electrical insulating materials	ETD 02		NA
	WG 5		Flexible insulating sleeving for electrical purposes	ETD 02	Abinash Bordoloi	a. Ms. Sneha Sheth, ERDA Vadodara b. Mr. Anand Gadodia, 3 A Associate Incorporated, Vapi
	WG 6		Rigid fibrous reinforced laminates for electrical purposes	ETD 02	Abinash Bordoloi	a. Mr. Anand Gadodia, 3 A Associate Incorporated, Vapi b. Dr. G S Prabhu, Fine Finish Organics Pvt. Ltd, Mumbai
	WG 7		Resins and varnishes	ETD 02	Abinash Bordoloi	a. Ms. Sneha Sheth, ERDA Vadodara b. Dr. G S Prabhu, Fine Finish Organics Pvt. Ltd, Mumbai
	PT 60554-3-6		IEC 60554-3-6 Specification for cellulosic papers for electrical purposes Part 3: Specifications for individual materials, Sheet 6: Requirements for presspaper, types P.2.1, P.4.1, P.4.2, P.4.3 and P.6.1	ETD 02	Abinash Bordoloi	Ms. Sneha Sheth, ERDA Vadodara
	MT 3		Plastic films	ETD 02	Abinash Bordoloi	No

	MT 10		Combined flexible materials	ETD 02	Abinash Bordoloi	a. Ms. Sneha Sheth, ERDA Vadodara b. Mr. Anand Gadodia, 3 A Associate Incorporated, Vapi
	MT 11		Mica products	ETD 02	Abinash Bordoloi	No
	MT 14		Pressboard and related material	ETD 02	Abinash Bordoloi	a. Ms. Sneha Sheth, ERDA Vadodara b. Mr. Raju Jaiswal, PGCIL Gurugram
	MT 15		Cellulosic paper products	ETD 02	Abinash Bordoloi	a. Ms. Sneha Sheth, ERDA Vadodara b. Mr. Raju Jaiswal, PGCIL Gurugram
	MT 16		Miscellaneous	ETD 02	Abinash Bordoloi	a. Mr. Sanjay Jha, 3 M Electro & Communications Pvt. Ltd b. Mr. Abinash Bordoloi, BIS
	JMT 60076-26		Functional requirements of insulating liquids for use in power transformers Managed by TC 14	ETD 02	Abinash Bordoloi	Ms. Sneha Sheth, ERDA Vadodara
TC 112		P	Evaluation and qualification of electrical insulating materials and systems	ETD 02	Abinash Bordoloi	NA

	WG 1		Thermal endurance	ETD 02	Abinash Bordoloi	a. Ms. Sneha Sheth, ERDA Vadodara b. Dr. Nilesh Pandya, Electrical Testing Centre, Vadodara c. Mr Satheesh Kumar Paramasivam,
	WG 2		Radiation	ETD 02	Abinash Bordoloi	No
	WG 3		Electric strength	ETD 02	Abinash Bordoloi	a. Ms Ashitha Parambalath Narendran b. Mr Satheesh Kumar Paramasivam c. Ms. Sneha Sheth, ERDA Vadodara d. Mr. Abinash Bordoloi, BIS
	WG 4		Dielectric/Resistive properties	ETD 02	Abinash Bordoloi	a. Ms Ashitha Parambalath Narendran b. Ms. Sneha Sheth, ERDA Vadodara
	WG 5		Tracking	ETD 02	Abinash Bordoloi	a. Ms Ashitha Parambalath Narendran b. Ms. Sneha Sheth, ERDA Vadodara c. Dr. Palash Mishra, NIT Warrangal d. Mr. Abinash Bordoloi, BIS

	WG 6		General methods of evaluation of electrical insulation systems	ETD 02	Abinash Bordoloi	Sh. Sunil Kumar Rauto, Sabic Research & Technology Private Limited, Bengaluru
	WG 7		Statistics	ETD 02	Abinash Bordoloi	
	WG 8		Various material properties	ETD 02	Abinash Bordoloi	a. Ms Ashitha Parambalath Narendran b. Ms. Sneha Sheth, ERDA Vadodara
	PT 61857-41		Electrical insulation systems - Procedures for thermal evaluation - Part 41: Specific requirements for	ETD 02	Abinash Bordoloi	No

			electrical insulation systems for use in dry-type high-voltage transformers with operating voltages of 1kV and above			
	MT 61857-2		Electrical insulation systems - Procedures for thermal evaluation - Part 2: Selection of the appropriate test method for evaluation and classification of electrical insulation systems	ETD 02	Abinash Bordoloi	No
	MT 62332		Electrical insulation systems (EIS) - Thermal evaluation of combined liquid and solid components	ETD 02	Abinash Bordoloi	No
	AG 11		Evaluation and qualification of electrical insulating materials and systems - Advisory Group (AG)	ETD 02	Abinash Bordoloi	No
	JMT 60076-26		Functional requirements of insulating liquids for use in power transformers Managed by TC 14	ETD 02	Abinash Bordoloi	No

ANNEX 15

3A Associates Incorporated
306 Advent Atria, Chincholi Bunder Road, Malad West,Mumbai 400 064,(India)
Phone:- +91 7666897333, 8928856967
Email:- sales@3aassociate.comWebsite: www.3aassociate.com

S-Hold™ tape

S-Hold ™ tape also known as HT Tape
is a high temperature arc and track-resistant tape used for insulation application.

Key application advantages

1) Saves human life by preventing electrocution
2) Prevents short circuits due to arcing and tracking
3) Protects electrical joints, cables and installation from direct rain
4) Increases life of the joints
5) Protection of overhead wires
6) Reduces maintenance to almost zero

Applications areas:

1) Terminals
2) Joints
3) Terminals of insulation cables based on butyl, oil based rubber, EPR rubber, PVC, PE, XLPE and others
4) Primary insulation where Class H are encountered
5) Splice overwrap in spacer wire & tree wire (overhead) operating above 15kV

Key properties:
The tape is high temperature arc-and track-resistant tape composed of self-fusing, inorganic silicone rubber.

- Excellent track resistance
- Excellent arc resistance
- Excellent ozone resistant self amalgamating tape
- Excellent weatherability
- High dielectric strength
- Class “H” material (180°C continuous operation)
- Tape is workable in extremely low temperatures
- Excellent conformability
- Excellent instantaneous fusion; does not need to be held down
- Water tight
- Fusion joint remains permanent

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Email:- sales@3aassociate.comWebsite: www.3aassociate.com

Key Properties

Dielectric Constant, 50Hz	2.8 at 23 °C	ASTM D 150
Dissipation Factor, 50Hz	0.004 at 23 °C	ASTM D 150
Breakdown Voltage	Minimum 34kV/mm	ASTM D 149
Thickness	0.5 ± 0.03 mm	ASTM D 1000
Width	25 ± 1.5 mm	ASTM D 1000
Tensile Strength	Min. 52 kg/cm^2	ASTM D 3579
Elongation	Min. 400%	ASTM D 3579
Volumetric resistance	Min. 3 x 10^{14} ohm.cm	IEC 60093
Water absorption	Max. 0.5%	FED STD 601 / ASTM D570
Tensile bonding property	Tensile failure	3A/QRQA04-20
Bond Strength	Min. 3.4 lbs/inch	ASTM D 2148
Cold Brittle point	-65 °C	ASTM D 746
Arc Resistance	Min. 1 min	ASTM D495 - 14
Flame Retardancy	Passes	UL 510

The low dielectric constant with water tight seals offers a perfect product for electrical jointing.

Installation Techniques

S-Hold ™ tape applied in half-lap layers using moderate tension. It should be applied on all tape-like terminations which will be operated either outdoors or in areas subjected to contamination or moisture. The following procedure should be used:

If possible, connect the termination to its final position. Otherwise, take care not to damage the final overwrap of silicone tape during installation. Overwrap the end seal with several half-lapped layers. Overwrap the entire termination with one additional half-lapped layer. For upright termination,begin from one inch on cable jacket and end at the lug. For inverted

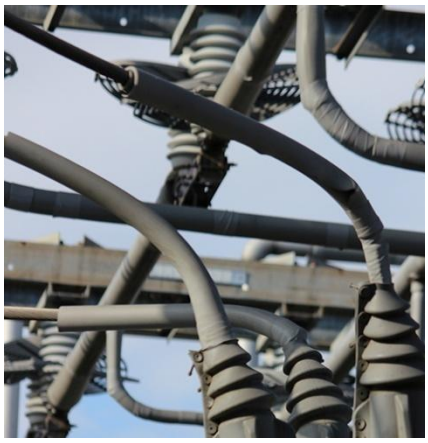
termination, end taping on the cable jacket. Wrap with moderate tension (10 to 100% elongation). Apply last lap with zero stretch. Press down to avoid end lifting before fusion takes place. It can also be applied over the exposed cable insulation and/or end seal used in conjunction with molded (slip-on) stress cones.

RoHS compliant
EU 2015/863

Shelf Life
2 years at 25C, 50% RH, Exposure above 45C is not recommended.

Availability
Colors - Grey, Red, Black, Green, Yellow, Blue, Off Red
Standard Size - 0.5mm X 10meter

See below for key application images



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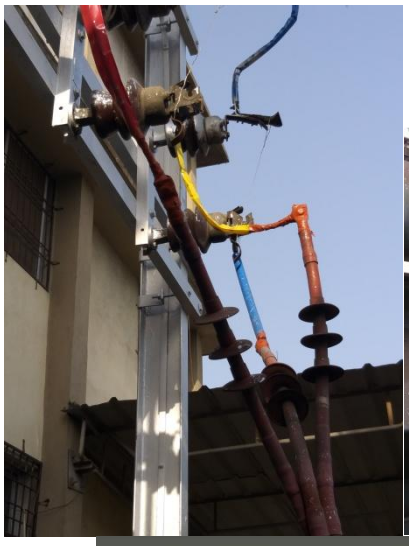

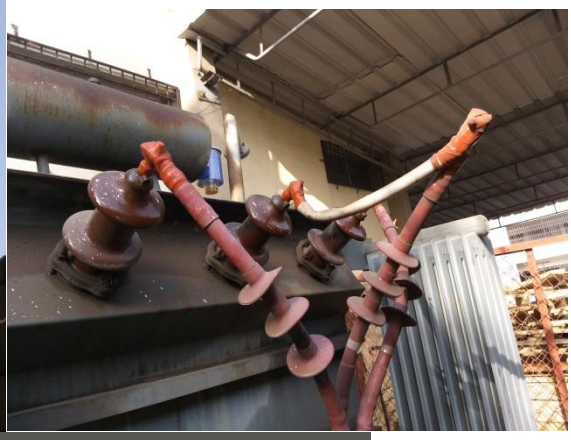

Cable Repair

Bus Bar Insulation

Terminal Joint

2022/11/30