

BUREAU OF INDIAN STANDARDS
DRAFT FOR COMMENTS ONLY

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Draft Indian Standard

**INSULATION COORDINATION FOR EQUIPMENT WITHIN LOW-VOLTAGE
SYSTEMS**

Part 3: Use of Coating, Potting or Molding for Protection against Pollution
(*Second Revision*)

(ICS 29.080.30)

High Voltage Engineering
Sectional Committee, ETD 19

Last date for Comments: 22/12/2023

NATIONAL FOREWORD

This Draft Standard which is identical with IEC 60664-3-2016 ‘Insulation coordination for equipment within low-voltage systems – Part 3: Use of coating, potting or moulding for protection against pollution’ issued by the International Electrotechnical Commission (IEC) is proposed to be adopted by the Bureau of Indian Standards on the recommendation of the Electrical Installation Sectional Committee and approval of the Electrotechnical Division Council.

The text of the IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appears referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards the current practice is to use a point (.) as the decimal marker.

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
IEC 60068-2-2:1974, Basic Environmental testing procedures – Part 2-2: Tests – Tests B: Dry heat	IS/IEC 60068-2-2 : 2007 Environmental Testing Part 2: Tests - Test B Section 2: Dry Heat	Identical with IEC 60068-2-2 : 2007
IEC 60068-2-14:1984, Basic Environmental testing	IS/IEC 60068-2-14 : 2009 Environmental testing Part 2:	Identical with IEC 60068-2-14 : 2009

procedures – Part 2-14: Tests – Test N: Change of temperature	Tests Section 14: Test N: Change of temperature	
IEC 61189-2:2006, Test methods for electrical materials, printed boards and other interconnection structures and assemblies – Part 2: Test methods for materials for interconnection structures	IS/IEC 61189-2 : 2006 Test methods for electrical materials printed boards and other interconnection structures and assemblies Part 2: Test methods for materials for interconnection structures	Identical
IEC 61189-3:2007, Test methods for electrical materials, printed boards and other interconnection structures and assemblies – Part 3: Test methods for interconnection structures (printed boards)	IS/IEC 61189-3 : 2007 Test methods for electrical materials printed boards and other interconnection structures and assemblies Part 3 Test methods for interconnection structures printed boards	Identical
ISO/IEC Guide 51, Safety aspects – Guidelines for their inclusion in standards	IS/ISO/IEC GUIDE-51 : 2014 ISO/IEC Guide 51 Safety aspects - Guidelines for their inclusion in standards (Second Revision)	Identical
IEC 60068-2-1:1990, Environmental testing – Part 2-1: Tests – Tests A: Cold	IS/IEC 60068-2-1 : 2007 IEC 60068-2-1:2007	Identical with IEC 60068-2-1 : 2007
IEC 60664-1:1992/2007 Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests	IS 15382 (Part 1) : 2022 IEC 60664-1:2020 Insulation Coordination for Equipment Within Low-Voltage Systems Part 1 Principles Requirements and Tests	Identical with IEC 60664-1 : 2020

In this adopted standard, reference appears to International Standards for which Indian Standards also exists. The corresponding Indian Standards, which are to be substituted, are listed below along with their degree of equivalence for the editions indicated:

The technical committee has reviewed the provisions of the following international standards referred in this adopted standard and decided that they are acceptable for use in conjunction with this standard.

<i>International Standard</i>	<i>Title</i>
IEC 60068-2-78:2001,	Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state
IEC 60326-2:1990,	Printed boards – Part 2: Test methods
IEC 60454-3-1:1998/AMD1:2001	Pressure-sensitive adhesive tapes for electrical purposes – Part 3: Specifications for individual materials – Sheet 1: PVC film tapes with pressure-sensitive adhesive

IEC 61249-2 (all parts),	Materials for printed boards and other interconnecting structures – Reinforced base materials, clad and unclad
IEC Guide 104:1997 2010,	The preparation of safety publications and the use of basic safety publications and group safety publications

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding off numerical values (*Second Revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Scope

This standard applies to assemblies protected against pollution by the use of coating, potting or moulding, thus allowing a reduction of clearance and creepage distances as described in IS/IEC 60664-1. This document describes the requirements and test procedures for two methods of protection: –

Type 1 protection improves the microenvironment of the parts under the protection;

Type 2 protection is considered to be similar to solid insulation.

This document also applies to all kinds of protected printed boards, including the surface of inner layers of multi-layer boards, substrates and similarly protected assemblies. In the case of multi-layer printed boards, the distances through an inner layer are covered by the requirements for solid insulation in IS/IEC 60664-1.

Note — The technical content of their document has not been enclosed as there are identical with the corresponding IEC standards for details, please refer the corresponding IEC 60664-3-2016 or kindly contact:

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