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*Draft Indian Standard*

**Explosive atmospheres –  
Part 32-2: Electrostatics hazards – Tests**

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Electrical Apparatus for Explosive Atmosphere  
Sectional Committee, ETD 22

Last date of receipt of  
comments: **01 Mar 2024**

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**NATIONAL FOREWORD**

This draft Indian Standard which is identical with IEC 60079-32-2 “Explosive atmospheres – Part 32-2: Electrostatics hazards – Tests” issued by the International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendation of the Electrical Apparatus for Explosive Atmosphere Sectional Committee.

This draft Indian standard provides the standard test methods used for the control of static electricity, such as surface resistance, earth leakage resistance, powder resistivity, liquid conductivity, capacitance and evaluation of the incendivity of provoked discharges.

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

- a) Wherever the words ‘International Standard’ appear 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.

In this 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:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
IEC 60079-0, Explosive atmospheres - Part 0: Equipment - General requirements	IS/IEC 60079-0 : 2017 Explosive Atmospheres Part 0 Equipment — General Requirements (Third Revision )	Identical
IEC TS 60079-32-1, Explosive atmospheres – Part 32-1: Electrostatic hazards, guidance	[Doc. ETD 22 (22396)WC Under preparation] IEC 60079 : PART 32: Sec 1: 2017	Identical to IEC 60079 : PART 32: Sec 1: 2017
IEC 60093, Methods of test for volume resistivity and surface resistivity of solid electrical insulating materials	IS 3396 : 1979 Methods of test for volume and surface resistivity of solid electrical insulating materials (First Revision)	Modified/Technically Equivalent with IEC 60093
IEC 60247, Insulating liquids – Measurement of relative permittivity, dielectric dissipation factor (tan d) and d.c. resistivity	IS 16840 : 2018 Insulating liquids - Measurement of relative permittivity, dielectric dissipation factor (Tan) and D.C. resistivity	Identical with IEC 60247: 2004
ISO 14309, Rubber, vulcanized or thermoplastic – Determination of volume and/or surface resistivity	IS 3400 (Part 15) : 1971 Methods of test for vulcanized rubbers: Part 15 volume resistivity of electrically conducting and antistatic rubbers	Identical with ISO 14309:2019

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>
<i>IEC 60243-1</i>	<i>Electric strength of insulating materials – Test methods – Part 1: Tests at power frequencies</i>
<i>IEC 60243-2</i>	<i>Electric strength of insulating materials – Test methods – Part 2: Additional requirements for tests using direct voltage</i>
<i>IEC TS 61241-2-2</i>	<i>Electrical apparatus for use in the presence of combustible dust – Part 2: Test methods – Section 2: Method for determining the electrical resistivity of dust in layers</i>
<i>IEC 61340-2-1</i>	<i>Electrostatics – Part 2-1: Measurement methods – Ability of materials and products to dissipate static electric charge</i>
<i>IEC 61340-2-3</i>	<i>Electrostatics – Part 2-3: Methods of test for determining the resistance and resistivity of solid planar materials used to avoid electrostatic charge accumulation</i>

<i>IEC 61340-4-4</i>	<i>Electrostatics – Part 4-4: Standard test methods for specific applications – Electrostatic classification of flexible intermediate bulk containers (FIBC)</i>
<i>ASTM E582</i>	<i>Standard test method for minimum ignition energy and quenching distance in gaseous mixtures</i>
<i>EN 1081</i>	<i>Resilient floor coverings – Determination of the electrical resistance</i>
<i>EN 1149-3</i>	<i>Protective clothing – Electrostatic properties Part 3: Test methods for measurement of charge decay</i>

Only the English language text has been retained while adopting it in this Indian Standard, and as such, the page numbers given here are not the same as in the IEC Publication.

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 or analysis shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding of 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.

Note: The technical content of the document is not available on website. For details, please refer the corresponding IEC 60079-32-2:2015 or kindly contact:

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