



REC Limited
(formerly Rural Electrification Corporation Limited)
(A Government of India Enterprise)
Core-5, 5th Floor, SCOPE Complex, 7, Lodi Road New Delhi 110003



REC/CO/PMD-II/QA/2019/ 1427

Dated: 14-03-2019

To
All Chairman/CMD/MD/CE
Generation/Transmission/Distribution Utilities

Subject: Information regarding recently published Indian Standard on various subjects related to electrotechnology-reg

Sir/Madam,

Ministry of Power has forwarded copies of four letters received from Bureau of Indian Standard (BIS) informing about the formulation of Indian Standards by Electrotechnical Department which have been published recently. The usage of Indian Standards ensures improvement of quality of products, allows rational use of resources, facilitates market access and provides customer protection. The synopsis of Indian Standards along with aforesaid letters is enclosed herewith for reference.

In view of above, it is requested to direct all the concerned officers of GENCO/TRANSCO/DISCOM to follow these specifications.

Thanking you,

Enclosure: As stated.

Yours sincerely,

(G. S. BHATI)

Executive Director (PMD-II/QA)

Copy to:

Sr. CPM(s)/CPM(s), REC R/SO- with a request to forward the copy of synopsis of Indian Standards along with BIS letter to GENCO/TRANSCO/DISCOM utilities in the state of their purview for wider use.



भारतीय मानक ब्यूरो

(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)

BUREAU OF INDIAN STANDARDS

(Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India)

मानक भवन, 9 बहादुरशाह ज़फ़र मार्ग, नई दिल्ली-110002

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वेबसाईट Website : www.bis.org.in, www.bis.gov.in

Our Ref: ETD/G-1

18 Feb 2019

Dr. Arun Kumar Verma
Joint Secretary,
Ministry of Power
Shram Shakti Bhawan,
Rafi Marg
New Delhi-110 001

JSD
DIR(R&D)

Handwritten signature/initials

Subject: Information regarding recently published Indian Standards on various subjects related to Electrotechnology

Dear Sir,

As you are aware that the Bureau of Indian Standards (BIS), the National Standards Body of India, is engaged in the formulation of Indian Standards in various areas of science and technology. Formulation of Indian Standards is done by BIS through its various (14) Division Councils. Electrotechnical Division Council (ETDC) is responsible for making standards in the field of electrotechnology through different technical committees. These technical committees comprise of representatives of various stakeholder interests such as industry, consumer, technologists, scientists, professionals, academicians, government policy makers, regulators etc.

The following Indian Standards formulated by Electrotechnical Department have been recently published:

IS No.	Title
IS 16859 : 2018 / IEC 60963 : 1988 Doc No. (11070) ETD 03	Specification For Unused Polybutenes
IS 16841 : 2018 / IEC 60944 : 1988 Doc. No. (11063) ETD 03	Guide For The Maintenance Of Silicone Transformer Liquids
IS 16838 : 2018 / IEC 60836 : 2015 Doc. No. (11061) ETD 03	Specification For Unused Silicon Insulating Liquids For Electrotechnical Purposes
IS 16785 : 2018 Doc. No. (10321) ETD 03	Guide For Interpretation Of Gases Generated In Natural Ester And Synthetic Ester-Immersed Transformers

The synopsis for the above mentioned Indian Standards are enclosed for your reference.

As these Indian Standards are of great of importance for the industry as well as for "Make in India" initiative of the Government of India, the information regarding these Indian Standards may be disseminated to the concerned stakeholders.

As you would agree that implementation of Indian Standards ensures improvement of quality of products, allows rational use of resources, facilitates market access and provides customer protection, the concerned stakeholders may, therefore, be requested to follow these specifications in their own interest as well as in the interest of the nation.

We look forward to your continued support to the national standardization work.

Thanking you,

Yours faithfully

(Rajeev Sharma)
Scientist F & Head
Electrotechnical Department
Ph: 011-23231192
Email: eetd@bis.gov.in

SURE

USINE

Handwritten initials/initials

SYNOPSIS

IS 16859 : 2018/ IEC 60963 : 1988

IS Title : Specification for unused polybutenes

a) Scope

1.1 This standard covers specifications and test methods for unused polybutenes, as delivered, intended for use as insulating liquids in electrical equipment.

The requirements given in Sheet 1 are only applicable to unused polybutenes used as an impregnant for paper insulated capacitors and cables and as a filling medium for pipe type cables.

Note — Polybutenes may be used in transformers, but nowadays this application is not wide enough to justify the development of international specifications.

Action could be taken when needed.

1.2 For the purpose of this standard two grades of polybutenes are considered: Class I and Class II based on the values of certain physical properties namely: viscosity, flash-point and pour-point.

Disclaimer:

SYNOPSIS

IS 16841 : 2018/ IEC 60944 : 1988

IS Title : Guide for the maintenance of silicone transformer liquids

a) Scope

This standard is a guide to the maintenance of silicone liquids in transformers with rated voltages up to 35 kV and is intended to assist the equipment operator in assessing the quality of the liquid during use in the equipment and maintaining it in serviceable condition.

Methods for reconditioning silicone transformer liquid are outlined.

It deals only with silicone liquids used in equipment where liquid sampling is practicable and which has not previously been filled with any other liquid.

Disclaimer:

SYNOPSIS

IS 16838 : 2018/ IEC 60836 : 2015

IS Title : Specifications for unused silicone insulating liquids for electrotechnical purposes

a) Scope

This standard covers specifications and test methods for unused silicone liquids intended for use in transformers and other electrotechnical equipment.

The specified characteristics of silicone transformer liquid classified as L-NTUK-8360300 (in accordance with IEC 61039) are described in Table 1.

Besides the standard transformer applications there are other applications of silicone liquids, such like cable accessories, capacitors, electrical magnets etc. The specified characteristics and minimum requirements for these liquids are described in Table 2.

NOTE — Maintenance of used silicone liquid in electrotechnical equipment is covered in a separate publication IEC 60944.

Disclaimer:

SYNOPSIS

IS 16785 : 2018/ IEEE Std C57.155TM-2014

IS Title : Guide for interpretation of gases generated in natural ester and synthetic ester-immersed transformers

a) Scope

The guide's application is for natural and synthetic ester-immersed transformers. This guide addresses the following:

- The theory of combustible gas generation in a natural and synthetic ester-filled transformer.
- Interpretation of the dissolved gas analysis results.
- Recommended actions based on the interpretation of dissolved gas analysis results.
- A bibliography of related literature.

b) Salient features of content:

The purpose of this guide is to assist the transformer operator in evaluating dissolved gas analysis (DGA) data obtained from natural ester and synthetic ester-filled transformers.

It lists the application of DGA to electrical equipment along with suggested operating procedures utilizing the detection and analysis of combustible gases.

Disclaimer:



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Shram Shakti Bhawan,
Rafi Marg
New Delhi-110 001

JS(D)

DIX (D/RE)

18 Feb 2019

Subject: Information regarding recently published Indian Standards on various subjects related to Electrotechnology

Dear Sir,

As you are aware that the Bureau of Indian Standards (BIS), the National Standards Body of India, is engaged in the formulation of Indian Standards in various areas of science and technology. Formulation of Indian Standards is done by BIS through its various (14) Division Councils. Electrotechnical Division Council (ETDC) is responsible for making standards in the field of electrotechnology through different technical committees. These technical committees comprise of representatives of various stakeholder interests such as industry, consumer, technologists, scientists, professionals, academicians, government policy makers, regulators etc.

The following Indian Standards formulated by Electrotechnical Department have been recently published:

IS No.	Title
IS 13730 (Part 0/Sec 4) : 2018 IEC 60317-01-4 : 2015 Doc : ETD 33 (11217)	Specification for particular types of winding wires: Pt - 0 General requirements, Sec 4 Glass-fibre wound, resin or varnish impregnated, bare or enameled rectangle copper wire (second revision)
IS 13730 (Part 2) : 2018 IEC 60317-2 : 2012 Doc : ETD 33 (11219)	Specification for particular types of winding wires: Pt - 2 Solderable polyurethane enameled round copper wire, class 130, with a bonding layer (second revision)
IS 13730 (Part 4) : 2018 IEC 60317-4 : 2015 Doc : ETD 33 (11220)	Specification for particular types of winding wires: Pt - 4 Solderable polyurethane enameled round copper wire, class 130 (second revision)
IS 13730 (Part 0/Sec 1) : 2018 IEC 60317-0-1 : 2013 Doc : ETD 33 (11215)	Specification for particular types of winding wires: Pt - 0 General requirements, Sec 1 Enameled round copper wire (second revision)

The synopsis for the above mentioned Indian Standards are enclosed for your reference.

As these Indian Standards are of great of importance for the industry as well as for "Make in India" initiative of the Government of India, the information regarding these Indian Standards may be disseminated to the concerned stakeholders.

SDR (RE)

US/RE

As you would agree that implementation of Indian Standards ensures improvement of quality of products, allows rational use of resources, facilitates market access and provides customer protection, the concerned stakeholders may, therefore, be requested to follow these specifications in their own interest as well as in the interest of the nation.

We look forward to your continued support to the national standardization work.

Thanking you,

Yours faithfully

A handwritten signature in black ink, appearing to read 'Rajeev Sharma', written over a faint, circular stamp or watermark.

(Rajeev Sharma)
Scientist F & Head
Electrotechnical Department
Ph: 011-23231192
Email: ectd@bis.gov.in

SYNOPSIS

IS 13730 (Part 4) : 2018

Specification for particular types of winding wires: Part 4 Solderable polyurethane enamelled round copper wire, class 130

This Part of standard specifies the requirements of solderable enamelled round copper winding wire of class 130 with a sole coating based on polyurethane resin, which may be modified provided it retains the chemical identity of the original resin and meets all specified wire requirements.

The range of nominal conductor diameters covered by this standard is:

- Grade 1: 0.018 mm up to and including 2.000 mm;
- Grade 2: 0.020 mm up to and including 2.000 mm.

The second revision of this standard has been undertaken to align it with the latest version of IEC 60317-4 : 2015 and to incorporate the latest technological upgradation and to align it with latest IEC standard. The major changes in this revision are as follows:

- new 3.2.2 containing general notes on winding wire, formerly a part of the scope;
- new 3.2.3 containing requirements for appearance;
- revision to references to Doc: ETD 33 (11215) to clarify that their application is normative;
- consolidation of 17.1 and 17.2 of the solderability requirements;
- revision to 19, dielectric dissipation factor; and
- new 23, pin hole test.

Disclaimer:

SYNOPSIS

IS 13730 (Part 2) : 2018

Specification for particular types of winding wires: Part 2 Solderable polyurethane enamelled round copper wire, class 130, with a bonding layer

This Part of standard specifies the requirements of solderable enamelled round copper winding wire of class 130 with a dual coating. The underlying coating is based on polyurethane resin, which may be modified providing it retains the chemical identity of the original resin and meets all specified wire requirements. The superimposed coating is a bonding layer based on a thermoplastic resin.

Class 105 is a thermal class that requires a minimum temperature index of 105 and a heat shock temperature of at least 155 °C.

The range of nominal conductor diameters covered by this standard is:

- Grade 1B: 0.020 mm up to and including 2.000 mm;
- Grade 2B: 0.020 mm up to and including 2.000 mm.

The second revision of this standard has been undertaken to align it with the latest version of IEC 60317-2 : 2012 and to incorporate the latest technological upgradation and to align it with latest IEC standard. The major changes in this revision are as follows:

- addition of requirements for appearance, new subclause 3.3 and
- addition of pin hole test requirements, Clause 23: Pin hole test.

Disclaimer:

SYNOPSIS

IS 13730 (Part 0/Sec 1) : 2018

Specification for particular types of winding wires: Part 0 General requirements, Section 1
Enamelled round copper wire (second revision)

This part of Is 13730 specifies general requirements of enamelled round copper winding wires with or without bonding layer.

The range of nominal conductor diameters is given in the relevant specification sheet.

This standard was originally published in 1993 and subsequently revised in 2012. First revision was based on IEC 60317-0-1 : 2008 'Specifications for particular types of winding wires — Part 0-1: General requirements — Enamelled round copper wire', issued by the International Electrotechnical Commission. The second revision of this standard has been undertaken to align it with the latest version of IEC 60317-0-1 : 2013.

The second revision of this standard has been undertaken to incorporate the latest technological upgradation and to align it with latest IEC standard. The major changes in this revision are as follows:

- revision to the definition of nominal conductor dimension;
- new sub-clause containing general notes on winding wire, formerly a part of the scope;
- revision to elongation requirements in Table 4;
- revisions to Clause 13, Breakdown voltage, to include new requirements for intermediate wire diameters;
- revision to continuity of insulation requirements in Table 13;
- revision to the introduction of Annex A;
- revision to B.2 of Annex B;
- revision to Table C.1 of Annex C. Keywords: requirements of enamelled round copper winding wires

Disclaimer:

SYNOPSIS

IS 13730 (Part 0/Sec 4) : 2018

**Specification for particular types of winding wires: Part 0 General requirements, Section 4
Glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire**

This part of IS 13730 specifies general requirements of glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire.

The range of nominal conductor diameters is given in the relevant specification sheet.

This standard was originally published in 1993 and subsequently revised in 2011. First revision was based on IEC 60317-0-4 : 2006 'Specifications for particular types of winding wires — Part 0-4: General requirements — Glass-fibre wound, resin or varnish impregnated, bare or enamelled rectangular copper wire', issued by the International Electrotechnical Commission. The second revision of this standard has been undertaken to align it with the latest version of IEC 60317-0-4 : 2015.

The second revision of this standard has been undertaken to incorporate the latest technological upgradation and to align it with latest IEC standard. The major changes in this revision are as follows:

- addition of dimensional requirements for grade 1 enamelled wire in Table 4;
- addition of dielectric breakdown requirements for grade 1 enamelled wire in Table 7.

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18 02 2019

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Joint Secretary,
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Shram Shakti Bhawan,
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New Delhi-110 001

JS(D)
DIR(RE/D)
9/3/19

Subject: Information regarding recently published Indian Standards on various subjects related to Electrotechnology

Dear Sir,

As you are aware that the Bureau of Indian Standards (BIS), *the National Standards Body of India*, is engaged in the formulation of Indian Standards in various areas of science and technology. Formulation of Indian Standards is done by BIS through its various (14) Division Councils. Electrotechnical Division Council (ETDC) is responsible for making standards in the field of electrotechnology through different technical committees. These technical committees comprise of representatives of various stakeholder interests such as industry, consumer, technologists, scientists, professionals, academicians, government policy makers, regulators etc.

The following Indian Standards formulated by Electrotechnical Department have been recently published:

IS No.	Title
IS 16498 (Part 1) : 2018 ETD 02 Doc. 6640	Specification For Pressboard And Presspaper For Electrical Purposes – Part 1: Definitions And General Requirements.
IS 16805 : 2018 ETD 11 Doc. 11529	Secondary Cells And Batteries Containing Alkaline Or Other Non-Acid Electrolytes – Safety Requirements For Secondary Lithium Cells And Batteries For Use In Industrial Applications

The synopsis for the above mentioned Indian Standards are enclosed for your reference.

As these Indian Standards are of great of importance for the industry as well as for “Make in India” initiative of the Government of India, the information regarding these Indian Standards may be disseminated to the concerned stakeholders.

As you would agree that implementation of Indian Standards ensures improvement of quality of products, allows rational use of resources, facilitates market access and provides customer protection, the concerned stakeholders may, therefore, be requested to follow these specifications in their own interest as well as in the interest of the nation.

We look forward to your continued support to the national standardization work.

Thanking you,

Yours faithfully


(Rajeev Sharma)
Scientist F & Head
Electrotechnical Department
Ph: 011-23231192
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8/3/19

no
8/3/19

US/RE
9/3/2019

SYNOPSIS

DOC. ETD 11 (11529)
IS 16805 : 2018

IS and Title:

IS 16805 : 2018

Secondary Cells And Batteries Containing Alkaline Or
Other Non-Acid Electrolytes – Safety Requirements For
Secondary Lithium Cells And Batteries, For Use In
Industrial Applications

a) SCOPE:

This document specifies requirements and tests for the safe operation of secondary lithium cells and batteries used in industrial applications including stationary applications.

When there exists an IEC standard specifying test conditions and requirements for cells used in special applications and which is in conflict with this document, the former takes precedence (e.g., IEC 62660 series on road vehicles).

The following are some examples of applications that utilize cells and batteries under the scope of this document.

- Stationary applications: telecom, uninterruptible power supplies (UPS), electrical energy storage system, utility switching, emergency power, and similar applications.
- Motive applications: forklift truck, golf cart, auto guided vehicle (AGV), railway, and marine, excluding road vehicles.

Since this document covers batteries for various industrial applications, it includes those requirements, which are common and minimum to the various applications.

b) Types/Grades/Classes, if any covered in the standard: N/A

c) Disclaimer (to be automatically provided by the program / software): N/A

SYNOPSIS

DOC. ETD 02 (6640)
IS 16498 (Part 1) : 2018

IS and Title:

IS 16498 (Part 1) : 2017

Pressboard and presspaper for electrical purposes - Part 1:
Definitions and general requirements

a) SCOPE:

This Standard contains definitions related to a classification of, and the general requirements to be fulfilled by, pressboard and presspaper for electrical purposes.

b) Types/Grades/Classes, if any covered in the standard: N/A

c) Disclaimer (to be automatically provided by the program / software): N/A



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19 Feb 2019

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New Delhi-110 001

IS (D)
DIY (RE/D)
19/2/19

Subject: Information regarding recently published Indian Standards on various subjects related to Electrotechnology

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The following Indian Standards formulated by Electrotechnical Department have been recently published:

IS No.	Title
IS 17066 (Part 1) : 2018 ETD 35 Doc. No. (11520)	Reed switches – Part 1 Generic specification

The synopsis for the above mentioned Indian Standards are enclosed for your reference.

As these Indian Standards are of great of importance for the industry as well as for "Make in India" initiative of the Government of India, the information regarding these Indian Standards may be disseminated to the concerned stakeholders.

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Thanking you,

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DIY
USI/RE

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No
2/19

SYNOPSIS

DOC. ETD 35 (11520)
IS : 2018

IS and Title:

IS : 2018

Reed switches - Part 1 : Generic specification

a) SCOPE:

This Indian Standard which is a generic specification applies to all types of reed switches including magnetically biased reed switches of assessed quality for use in general and industrial applications.

It lists the tests and measurement procedures which may be selected for use in detail specifications for such reed switches.

This standard applies to reed switches which are operated by an applied magnetic field; it is not restricted to any particular type of contact load.

For applications of reed switches, this standard is recommended to be used together with specific product standards.

b) Types/Grades/Classes, if any covered in the standard: N/A

c) Disclaimer (to be automatically provided by the program / software): N/A