



BSI Standards Publication

Electric cables - Accessories - Material characterization

Part 1: Fingerprinting for resinous compounds

National foreword

This British Standard is the UK implementation of EN 50655-1:2017. It supersedes BS 7933-1:2007, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GEL/20/11, Electric Cable accessories.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Electric cables - Accessories - Material characterization - Part 1: Fingerprinting for resinous compounds

Câbles électriques - Accessoires - Caractérisation des
matériaux - Partie 1: Essais d'identification pour les
composés résineux

Kabel und isolierte Leitungen - Garnituren -
Materialcharakterisierung - Teil 1: Fingerprintprüfungen für
Reaktionsharzmassen

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European foreword

This document (EN 50655-1:2017) has been prepared by CLC/TC 20 "Electric cables".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-09-18
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2020-09-18

This document supersedes HD 631.1 S2:2007.

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EN 50655 series will consist of the following:

- EN 50655-1, *Electric cables - Accessories - Material characterization - Part 1: Fingerprinting for resinous compounds*;
- EN 50655-2, *Electric cables - Accessories - Material characterization - Part 2: Fingerprinting for heat shrinkable components for low and medium voltage applications up to 20,8/36 (42) kV*;
- EN 50655-3, *Electric cables - Accessories - Material characterization - Part 3: Fingerprinting for cold shrinkable components for low and medium voltage applications up to 20,8/36 (42) kV*.

NOTE It has been assumed in the preparation of this document that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

WARNING This European Standard calls for the use of substances and/or procedures that may be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

1 Scope

This European Standard specifies the test methods and requirements of tests for fingerprinting (as defined in 3.9) of solvent-free polymerizable, reacting resinous compound intended to be used for electrical insulation and/or mechanical protection in cable accessories covered by EN 50393, HD 629.1 and HD 629.2, for low and medium voltage up to 20,8/36 (42) kV.

Fingerprinting testing of materials does not have a mandatory link to type testing of accessories. It is regarded as stand-alone tests, but it may be carried out in combination with the accessory type tests.

NOTE Information on health and safety is given in Annex A.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50393, *Test methods and requirements for accessories for use on distribution cables of rated voltage 0,6/1,0 (1,2) kV*

EN 60455-1, *Resin based reactive compounds used for electrical insulation - Part 1: Definitions and general requirements (IEC 60455-1)*

EN 60455-2, *Resin based reactive compounds used for electrical insulation - Part 2: Methods of test (IEC 60455-2)*

EN 60455-3-8, *Resin based reactive compounds used for electrical insulation - Part 3: Specifications for individual materials - Sheet 8: Resins for cable accessories (IEC 60455-3-8)*

EN ISO 291, *Plastics - Standard atmospheres for conditioning and testing (ISO 291)*

EN ISO 868, *Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868)*

EN ISO 1183-1, *Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1)*

EN ISO 2555, *Plastics - Resins in the liquid state or as emulsions or dispersions - Determination of apparent viscosity by the Brookfield Test method (ISO 2555)*

HD 629.1, *Test requirements on accessories for use on power cables of rated voltage from 3,6/6(7,2) kV up to 20,8/36(42) kV - Part 1: Cables with extruded insulation*

HD 629.2, *Test requirements on accessories for use on power cables of rated voltage from 3,6/6(7,2) kV up to 20,8/36(42) kV - Part 2: Cables with impregnated paper insulation*

IEC 60050-461, *International Electrotechnical Vocabulary - Part 461: Electric cables*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-461 and EN 60455-1 and the following apply.

3.1

resinous compound

compound for cable accessories made by the mixture of at least two components (resin and reactive component)

Note 1 to entry: For some applications, additional components such as filler may be needed.