

<b>STN</b>	<b>Elektrické káble Doplňujúce skúšobné metódy</b>	<b>STN 34 7010-82</b>  34 7010
------------	--	--

Electric cables - Additional test methods

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/19

Obsahuje: HD 605-S3:2019

Oznámením tejto normy sa od 01.07.2022 ruší  
STN 34 7010-82 z marca 2009

**129758**

**HARMONIZATION DOCUMENT****HD 605-S3****DOCUMENT D'HARMONISATION****HARMONISIERUNGSDOKUMENT**

August 2019

ICS 29.060.20

Supersedes HD 605 S2:2008 and all of its amendments  
and corrigenda (if any)

English Version

**Electric cables - Additional test methods**

Câbles électriques - Méthodes d'essais supplémentaires

Starkstromkabel - Ergänzende Prüfverfahren

This Harmonization Document was approved by CENELEC on 2019-07-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document at national level.

Up-to-date lists and bibliographical references concerning such national implementations may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This Harmonization Document exists in three official versions (English, French, German).

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**HD 605 S3:2019 (E)**

<b>Contents</b>	<b>Page</b>
European foreword .....	4
1 General .....	5
1.1 Scope .....	5
1.2 Applicable tests .....	5
1.3 Classification of tests .....	5
1.4 Sampling .....	5
1.5 Test conditions .....	5
2 Non-electrical tests .....	6
2.1 Dimensional measurements .....	6
2.2 Mechanical tests on non-metallic components .....	23
2.3 Mechanical tests on metallic components .....	33
2.4 Non-electrical tests on samples of complete cable .....	35
2.5 Physical and chemical tests .....	63
3 Electrical tests .....	76
3.1 Electrical resistance .....	76
3.2 Voltage tests .....	80
3.3 Insulation resistance tests .....	86
3.4 Surface resistance of the cable oversheath .....	89
3.5 (Spare) .....	89
3.6 Spark tests .....	89
3.7 Measurement of transfer impedance .....	90
3.8 Heating cycle test .....	92
3.9 Measurement of the electrical resistivity of the semi-conducting screens .....	96
3.10 Partial discharge test .....	98
3.11 Tan $\delta$ measurement .....	100
3.12 Resistance of the insulating sheaths to weather conditions .....	100
3.13 Adherence of screens at short circuit temperature .....	103
3.14 Resistivity test for water blocking tape .....	104
3.15 Moisture absorption test – Electric method .....	104
3.16 (Spare) .....	105
3.17 (Spare) .....	105
3.18 (Spare) .....	105
3.19 (Spare) .....	105
4 Fire performance tests .....	105
4.1 Flame propagation tests .....	105
4.2 Smoke emission tests .....	109
4.3 (Spare) .....	111
4.4 Toxic gas emission tests .....	111
4.5 (Spare) .....	118
4.6 (Spare) .....	118
5 Long term tests .....	118
5.1 Thermal endurance tests .....	118
5.2 Pulling lubricant immersion test .....	120

5.3	Long term water immersion test.....	120
5.4	Long term voltage test.....	121
5.5	Radial watertightness test and corrosion resistance test of metallic screen.....	126
5.6	Insulation water resistance test.....	126
Annex A (normative)	Normative references .....	128
Annex B (normative)	Rounding of numbers .....	130
B.1	Rounding of numbers for the purpose of the fictitious calculation method .....	130
B.2	Rounding of numbers for other purposes.....	130
Bibliography	.....	132

**HD 605 S3:2019 (E)****European foreword**

This document (HD 605 S3:2019) 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) 2020-07-01
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2022-07-01

This document supersedes HD 605 S2:2008 and all of its amendments and corrigenda (if any).

In order to maintain the integrity of existing clause numbers, and hence avoid unnecessary amendments to over 100 particular sections of the product HDs, the normative references are given in Annex A.

The numbering of tables and figures in this standard is not conventional. It retains the scheme as used in HD 605 S1. This is to facilitate easier cross referencing in national sections of HD 603, HD 620 and other compendia HDs. It also allows for continuing work to rationalize and harmonize more of these test methods in the future, without the need for further re-numbering.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

## 1 General

### 1.1 Scope

This HD collates and specifies the test methods to be used for testing polymeric insulated and sheathed electric cables, of rated voltage up to and including 20,8/36 kV, intended for public distribution systems, and for use in power generating plants and sub-stations.

Test methods in this HD are additional to those already harmonized, e.g. EN 60332-1 series and EN 60811 series, and are used for testing cable types specified in HD 603, HD 604, HD 620, HD 622, HD 626 and HD 627. In each case, these HDs give complementary information needed for the practical application to each specific type. Therefore the present HD as such is not sufficient for carrying out and evaluating the tests on electric cables.

Full test conditions (e.g. temperatures, durations) and/or test requirements are not specified in this HD. Such data needed to carry out the tests is given in the particular sections.

NOTE The words 'particular section' refer throughout to the section of HD 603 or HD 604, or other HD to which

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**