



SLOVENSKI STANDARD

SIST HD 21.8 S1:1998

01-februar-1998

Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 8: Single core non-sheathed cables for decorative chains

Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V -- Part 8: Single core non-sheathed cables for decorative chains

Polyvinylchlorid-isolierte Leitungen mit Nennspannungen bis 450/750 V -- Teil 8:
Einadrige Leitungen ohne Mantel für Lichterketten

Conducteurs et câbles isolés au polychlorure de vinyle, de tension assignée au plus
égale à 450/750 V -- Partie 8: Conducteurs souples pour guirlandes lumineuses

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ICS:

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Descriptors: Electrical installation, insulated cable, flexible cable, polyvinyl chloride, lighting chain

**Polyvinyl chloride insulated cables of rated
voltages up to and including 450/750 V
Part 8: Single core non-sheathed cables for decorative chains**

Conducteurs et câbles isolés au
polychlorure de vinyle, de tension
assignée au plus égale à 450/750 V
Huitième partie: Monoconducteurs
pour guirlandes lumineuses

Polyvinylchlorid-isolierte
Leitungen mit Nennspannungen
bis 450/750 V
Teil 8: Einadrige Leitungen ohne
Mantel für Lichterketten

BODY OF THE HD

The Harmonization Document consists of:

[SIST HD 21.8 S1:1998](https://standards.iteh.ai/catalog/standards/sist/B528e74-8165-44b0-a88b-250ef25e7abd/sist-hd-21-8-s1-1998)<https://standards.iteh.ai/catalog/standards/sist/B528e74-8165-44b0-a88b-250ef25e7abd/sist-hd-21-8-s1-1998>

- text prepared by CENELEC TC 20

This Harmonization Document was approved by CENELEC on 1990-09-11.

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

According to the CEN/CENELEC Internal Regulations the CENELEC member National Committees are bound:

to publish their new harmonized national standard by or before **1991-06-01**,to withdraw all conflicting national standards by or before **1991-06-01**.

Harmonized national standards are listed on the HD information sheet, which is available from the CENELEC National Committees or from the CENELEC Central Secretariat.

The CENELEC National Committees are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



REPUBLIKA SLOVENIJA
MINISTRSTVO ZA ZNANOST IN TEHNOLOGIJO
Urad RS za standardizacijo in meroslovje
LJUBLJANA

SIST..... HD 21.8 S1
PREVZET PO METODI RAZGLASITVE

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FOREWORD

HD 21 was originally adopted by CENELEC on 9th July 1975.

Edition 2 of HD 21 was implemented on 1st January 1984, and at that time contained 5 parts.

Since 1984, new parts have been published, original parts amended, and in addition HD 505 has superseded HD 385 as the cross-reference for test methods.

This reprint of the 5 parts of Edition 2 of HD 21 incorporates all ratified amendments and the change to HD 505.

The new parts 8 and 9 of HD 21, which are Edition 1 versions, are reprinted to incorporate their amendment and/or the change to HD 505. The issue of new Part 7 coincides with this reprint.

HD 21 now has the following parts:

- HD 21.1 S2 - General requirements (with AM1, AM2, AM3 and AM4)
- HD 21.2 S2 - Test methods (with AM1)
- HD 21.3 S2 - Single core non-sheathed cables for fixed wiring (with AM1)
- HD 21.4 S2 - Sheathed cables for fixed wiring
- HD 21.5 S2 - Flexible cables (cords) (with AM1, AM2 and AM3)
- HD 21.6 - (Spare)
- HD 21.7 S1 - Single core non-sheathed cables for internal wiring (90 °C conductor temperature)
- HD 21.8 S1 - Single core non-sheathed cables for decorative chains (with AM1)
- HD 21.9 S1 - Single core non-sheathed cables for installation at low temperatures (with AM1)

This Edition 1 of part 8 of HD 21 now incorporates:

AM 1 - dop 1991-06-01

References are made, in this Part 8 of HD 21, to other parts of this HD and to other Harmonisation Documents as follows:

- HD 383 Conductors of insulated cables (Endorsing IEC 228 and 228A)
- HD 405.1 Tests on electric cables under fire conditions.
Part 1 : Test on a single vertical cable (Endorsing IEC 332-1)
- HD 505 Common test methods for insulating and sheathing materials of electric cables (Endorsing IEC 811)

In all cases a reference to another HD implies the latest edition of that document .



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Polyvinyl chloride insulated cables of rated voltages up to and including 450/750V

Part 8: Single core non-sheathed cables for decorative chains

1 Scope

This Part 8 of the HD details the particular requirements for PVC insulated cables of rated voltages up to U_0/U 300/500 V for use indoors as decorative chains.

Each cable shall comply with the appropriate requirements given in Part 1 of this HD and the particular requirements of this Part 8.

2 Single core non-sheathed cables for decorative chains

2.1 Code designation

H05V-F.

2.2 Rated voltage

300/500 V

2.3 Construction

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2.3.1 Conductor

Number of Conductors : 1.

The conductor shall comply with the requirements given in HD 383 for Class 5 conductors.

2.3.2 Insulation

The insulation shall be polyvinyl chloride compound of the type T12, applied around each conductor.

The insulation thickness shall comply with the specified value given in Table I, column 2 of this Part.

The insulation resistance at 70°C shall be not less than the values given in Table I, column 4 of this Part.

2.3.3 Overall diameter

The mean overall diameter shall not be more than the upper limit given in Table I, column 3 of this Part.

2.3.4 Core identification

Bi-colours shall not be used.
 Preferred colour: green

2.4 Tests

Compliance with the requirements of clause 2.3 of this Part shall be checked by inspection and by the tests given in Table II of this Part.

2.5 Guide to use

See Appendix 1 to Part 1 of this HD.

Table I: General data for Type H05V-F

1	2	3	4
Nominal cross-sectional areas of conductors mm ²	Thickness of insulation specified value mm	Mean overall diameter Upper limit mm	Minimum insulation resistance at 70°C Mohm.km
0.5	0.8	3.0	0.016
0.75	0.8	3.2	0.014

Table II: Tests for Type H05V-F

1	2	3	4	5
Ref. No.	Tests	Category of test	Test method described in:	
			HD	Clause
1.	<u>Electrical tests</u>			
1.1	Resistance of conductors	T, S	21.2	2.1
1.2	Voltage test on completed cable at 2000 V	T, S	21.2	2.2
1.3	Insulation resistance at 70°C	T	21.2	2.4
1.4	Resistance of insulation to d.c.	T	21.2	2.5
1.5	Absence of faults in insulation	R	21.2	2.6
2.	<u>Provisions covering constructional and dimensional characteristics</u>			
2.1	Checking of compliance with constructional provisions	T, S	21.1	Inspection and manual tests
2.2	Measurement of thickness of insulation	T, S	21.2	1.9
2.3	Measurement of overall diameter	T, S	21.2	1.11
3.	<u>Mechanical properties of insulation</u>			
3.1	Tensile test before ageing	T	505.1.1	9.1
3.2	Tensile test after ageing	T	505.1.2	8.1
3.3	Loss of mass test	T	505.3.2	8.1
4.	<u>Pressure test at high temperature</u>	T	505.3.1	8.1
5.	<u>Tests at low temperature</u>			
5.1	Bending test for insulation	T	505.1.4	8.1
6.	<u>Heat shock test</u>	T	505.3.1	9.1
7.	<u>Test under fire conditions</u>	T	405.1	—

3 Single core insulated cables for indoor decorative lighting chains

3.1 Code designation

H03VH7-H

3.2 Rated voltage

300/300 V

3.3 Construction

3.3.1 Conductor

Number of conductors: 1.

The conductor shall comply with requirements given in HD 383 for Class 6 conductors.

3.3.2 Insulation

The insulation shall be polyvinyl chloride compound of the Type TI2, applied by dual extrusion around the conductor.

The outer layer of insulation shall be a contrasting colour to that of the inner layer, but should adhere to the inner layer.

The combined thickness of inner and outer layer of insulation shall comply with the overall thickness specified in Table III, columns 3 and 4 of this Part, but at no point shall the thickness of either layer be less than 0.2 mm.

The insulation resistance at 70°C shall be not less than the values given in Table III, column 5 of this Part.

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3.3.3 Overall thickness

The minimum and mean overall thickness shall comply with the values specified in Table III, columns 3 and 4 respectively of this Part.

3.3.4 Cable identification

Bi-colours shall not be used.

Preferred outer layer colour: green.

3.4 Tests

Compliance with the requirements of subclause 3.3 of this Part shall be checked by inspection and by the tests given in Table IV of this Part.

3.5 Guide to use

See Appendix 1 to Part 1.