SLOVENSKI STANDARD
SIST HD 22.8 S2:1998

01-februar-1998

Kabli z omreženo izolacijo za naznačene napetosti do vključno 450/750 V - 8. del: Kabli za okrasne verige, oplaščeni s polikloroprenom ali enakovrednim sintetičnim elastomerom

Cables of rated voltages up to and including 450/750 V and having cross-linked insulation - Part 8: Polychloroprene or equivalent synthetic elastomer sheathed cable for decorative chains

Starkstromleitungen mit vernetzter Isolierhülle für Nennspannungen bis 475/750 V -- Teil 8: Starkstromleitungen mit einem Mantel aus Polychloropren oder gleichwertigem synthetischen Elastomer für Lichterketten

Conducteurs et câbles isolés avec des matériaux réticulés de tension assignée au plus égale à 450/750 V -- Partie 8: Câbles sous gaine en polychloroprène ou élastomère synthétique équivalent pour guirlandes lumineuses

Ta slovenski standard je istoveten z: **HD 22.8 S2:1994**

ICS:

29.060.20	Kabli	Cables

SIST HD 22.8 S2:1998 **en**

HARMONIZATION DOCUMENT
DOCUMENT D'HARMONISATION
HARMONISIERUNGSDOKUMENT

HD 22.8 S2

December 1994

ICS 29.060.20

Supersedes HD 22.8 S1:1992 + amendment

Descriptors: Electrical installation, insulated cable, outer sheath, rubber, lighting chain

English version

Rubber insulated cables of rated voltages up to and including 450/750 V
Part 8: Polychloroprene or equivalent synthetic elastomer sheathed cable for decorative chains

Conducteurs et câbles isolés au caoutchouc de tension assignée au plus égale à 450/750 V
Partie 8: Câbles sous gaine en polychloroprène ou élastomère synthétique équivalent pour guirlandes lumineuses

Isolierte Starkstromleitungen mit einer Isolierung aus Gummi mit Nennspannungen bis 450/750 V
Teil 8: Starkstromleitungen mit einem Mantel aus Polychloropren oder gleichwertigem synthetischen Gummi für Lichterketten

This Harmonization Document was approved by CENELEC on 1994-05-15. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document on a national level.

Up-to-date lists and bibliographical references concerning such national implementation may be obtained on application to the Central Secretariat 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

FOREWORD

HD22 was originally adopted by CENELEC on 9th July 1975.

Edition 2 of HD22 was implemented on 1st January 1984, and at that time contained four 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 Edition 2 of HD 22.8 has been introduced to cover the complete revision of the overall dimensions in line with EN 60719.

HD22 now has the following parts: (* = new publication or new edition available shortly)

HD22.1 S2	-	General requirements (with AM1 to AM10)
HD22.2 S2	-	Test methods (with AM1 to AM4 inclusive)
HD22.3 S3*	-	Heat resistant silicone rubber insulated cables
HD22.4 S3*	-	Cords and flexible cables
HD22.5	-	(Spare)
HD22.6 S2*	-	Arc welding cables
HD22.7 S2*	-	Cables with increased heat resistance for internal wiring for a conductor temperature of 110°C
HD22.8 S2	-	Polychloroprene or equivalent synthetic elastomer sheathed cable for use as decorative chains
HD 22.9 S2*	-	Single core non-sheathed cables for fixed wiring having low emission of smoke and corrosive gases
HD 22.10 S1	-	EPR insulated and polyurethane sheathed flexible cables
HD 22.11 S1*	-	EVA cords and flexible cables
HD 22.12 S1*	-	Heat resistant EPR cords and flexible cables
HD 22.13 S1*	-	Single and multicore flexible cables, insulated and sheathed with crosslinked compound and having low emission of smoke and corrosive gases
HD 22.14 S1*	-	Cords for applications requiring high flexibility

In order that this revision of Part 8 of HD 22 does not introduce unnecessary changes to long-established clause numbers, the Normative References (which would otherwise be inserted as clause 2) are given in Annex A.

At the request of CENELEC TC20 'Electric Cables' this draft was submitted to the CENELEC Unique Acceptance Procedure (UAP) in November 1993 and was approved by CENELEC as HD 22.8 S2 on 1994-05-15.

The following dates were fixed:

– latest date by which the existence of the HD has to be announced at national level	(doa)	1995-01-15
– latest date by which the HD has to be implemented at national level by publication of a harmonized national standard or by endorsement	(dop)	1995-07-15
– latest date by which the national standards conflicting with the HD have to be withdrawn	(dow)	1995-07-15

For products which have complied with the previous edition of this standard before 1995-07-15, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1996-07-15.

CONTENTS

RUBBER INSULATED CABLES OF RATED VOLTAGE UP TO AND INCLUDING 450/750V

PART 8 : POLYCHLOROPRENE OR EQUIVALENT SYNTHETIC ELASTOMER SHEATHED CABLE FOR DECORATIVE CHAINS

1. Scope

This Part 8 of the HD details the particular requirements for rubber insulated, polychloroprene, or other equivalent synthetic elastomer, sheathed cable of rated voltage Uo/U not exceeding 300/500V for use 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.

NOTE: The overall dimensions in this Part of HD 22 have been calculated in accordance with EN 60719

2. Polychloroprene or equivalent synthetic elastomer, sheathed cable for decorative chains

2.1 Code designation

H05RN-F for single core cables
H05RNH2-F for flat two core cables

2.2 Rated voltage

300/500V

2.3 Construction

2.3.1 Conductor

Number of conductors: 1 or 2
The conductors shall comply with the requirements given in HD 383 for Class 5 conductors. The wires may be plain or tinned.

2.3.2 Separator

A separator of suitable material may be applied around each conductor.

2.3.3 Insulation

The insulation shall be rubber compound of the type EI 4 applied around each conductor.

The insulation shall be applied by extrusion.

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

2.3.4 Assembly of cores

The cores of the two core cables shall be laid in parallel. The distance between the centre of conductors shall comply with the mean values given in Table I, columns 3 and 4 of this Part.

2.3.5 Sheath

The sheath shall be rubber compound of type EM 2 applied around the core.

The sheath shall be applied as follows:-

(a) for single core cables

The sheath shall be capable of being removed without damage to the cores.

(b) for two core cables

The sheath shall fill the spaces between the cores forming a filling but it shall be capable of being removed without damage to the cores.

The thickness of the sheath shall comply with the specified value given in Table I, column 5 of this Part.

The preferred sheath colours are green or black.

2.3.6 Overall dimensions

The mean overall dimensions shall be within the limits given in Table I, columns 6 and 7 of this Part.

2.3.7 Core identification

Each core shall be identified by colour as follows:-

single core cable: brown
two core cable : brown and light blue

2.3.8 Outer marking

At least the designatory marking H05RN shall be printed or embossed on, or indented into, the sheath.

The marking shall be continuous, in accordance with Part 1, sub-clause 3.1.1.

2.4 Tests

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

For the requirements of sub-clause 2.3.4, the procedure to be followed is generally as specified in clause 1.11 of Part 2 of this HD except that the measured value is the distance between the centres of the two conductors. The mean of the values obtained from the three samples shall be taken as the mean distance.

2.5 Guide to use (informative)

See HD 516.

Table I

General data for types H05RN-F AND H05RNH2-F

1	2	3	4	5	6	7
Number and nominal cross-sectional area of conductors	Thickness of insulation Specified value	Distance between centres of conductors		Thickness of sheath Specified value	Mean overall dimensions	
		mean lower limit	mean upper limit		lower limit	upper limit
mm²	mm	mm	mm	mm	mm	mm
1 x 0.75	0.8	-	-	0.8	4.1	5.2
1 x 1.0	0.8	-	-	0.8	4.3	5.3
1 x 1.5	0.8	-	-	0.8	4.5	5.6
2 x 1.5	0.8	6.7	7.0	0.8	5.0 x 13.0	6.0 x 14.0
2 x 2.5	0.8	6.7	7.0	0.8	5.0 x 13.0	6.0 x 14.0

Table II

Tests for Types H05RN-F and H05RNH2-F

1	2	3	4	5
Ref. No.	Test	Category of test	Test Method described in:	
			HD	Clause
1.	Electrical Tests			
1.1	Resistance of conductors	T, S	22.2	2.1
1.2	Voltage test on cores at 2000V	T	22.2	2.3
1.3	Voltage test on completed cable at 2000V	T, S	22.2	2.2
1.4	Absence of faults in insulation	R	22.2	2.6
1.5	Surface insulation resistance of sheath	T	22.2	2.7
2.	Provisions covering constructional and dimensional characteristics			
2.1	Checking of compliance with constructional provisions	T, S	22.1	Inspection and manual tests
2.2	Measurement of thickness of insulation	T, S	22.2	1.9
2.3	Measurement of sheath thickness	T, S	22.2	1.10
2.4	Measurement of overall dimensions	T, S	22.2	1.11
2.4.1	Mean Value	T, S		
2.4.2	Ovality	T, S		
2.4.3	Distance between centres of conductors	T, S	22.8	2.4
2.5	Solderability test (untinned conductors)	T	22.2	1.12
3.	Mechanical properties of insulation			
3.1	Tensile test before ageing	T	505.1.1	9.1
3.2	Tensile test after ageing in the air oven[1]	T	505.1.2	8.1 .3.2a
3.3	Tensile test after ageing in the oxygen bomb	T	505.1.2	8.3
3.4	Hot set test	T	505.2.1	9
3.5	Ozone resistance test: either method may be used			
	(a) Method A	T	505.2.1	8
	(b) Method B	T	22.2	7.3

[1] See also the footnote to Table 1 of HD22.1 for compound EI 4.