

**Polüvinüülkloriidisolatsiooniga kaablid
nimipingega kuni 450/750 V. Osa 9:
Ühesooneline kaitsekestata kaabel
paigaldamiseks madalal temperatuuril**

Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V - Part 9: Single core non-sheathed cable for installation at low temperatures

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-HD 21.9 S2:2001 sisaldab Euroopa standardi HD 21.9 S2:1995+A1:1999 ingliskeelset teksti. Käesolev dokument on jõustatud 10.10.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-HD 21.9 S2:2001 consists of the English text of the European standard HD 21.9 S2:1995+A1:1999. This document is endorsed on 10.10.2001 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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ICS 29.060.20

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HARMONIZATION DOCUMENT
DOCUMENT D'HARMONISATION
HARMONISIERUNGSDOKUMENT

HD 21.9 S2

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Supersedes HD 21.9 S1:1990

Descriptors: Electric cable, insulated cable, insulated conductor, polyvinyl chloride, electric installation, test method, test at low temperature

English version

Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V
Part 9: Single core non-sheathed cable for installation at low temperatures

Conducteurs et câbles isolés au polychlorure de vinyle, de tension assignée au plus égale à 450/750 V
Partie 9: Conducteurs pour installations fixes à basse température

Polyvinylchlorid-isolierte Leitungen mit Nennspannungen bis 450/750 V
Teil 9: Einadrige Leitungen ohne Mantel zur Verlegung bei tiefen Temperaturen

This Harmonization Document was approved by CENELEC on 1994-12-06. 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

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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 five 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 21.9 has been introduced to cover the complete revision of the overall dimensions, in line with EN 60719, and was approved by TC 20 at its London meeting in October 1993 to go forward to UAP.

HD 21 now has the following parts:

HD 21.1 S2	-	General requirements
HD 21.2 S2	-	Test methods
HD 21.3 S3	-	Non sheathed cables for fixed wiring
HD 21.4 S3	-	Sheathed cables for fixed wiring
HD 21.5 S3	-	Flexible cables (Cords)
HD 21.6	-	(Spare)
HD 21.7 S2	-	Single core non-sheathed cables for internal wiring (90 °C conductor temperature)
HD 21.8 S1	-	Single core non-sheathed cables for decorative chains
HD 21.9 S2	-	Single core non-sheathed cables for installations at low temperatures
HD 21.10 S1	-	Extensible leads

This Harmonization Document was prepared by the Technical Committee CENELEC TC 20, Electric cables.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as HD 21.9 S2 on 1994-12-06.

The following dates were fixed:

- latest date by which the existence of the HD has to be announced at national level (doa) 1995-06-01
- latest date by which the HD has to be implemented at national level by publication of a harmonized national standard or by endorsement (dop) 1995-12-01
- latest date by which the national standards conflicting with the HD have to be withdrawn (dow) 1995-12-01

For products which have complied with HD 21.9 S1:1990 before 1995-12-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1996-12-01.

NORMATIVE REFERENCES

References are made, in this Part 9 of HD21, to other parts of this HD and to other ENs or HDs 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)
EN 60719	Calculation of the low and upper limits for the average outer dimensions of cables with circular copper conductors and of rated voltages up to and including 450/750V

INFORMATIVE REFERENCE

Reference is made in this Part 9 of HD 21 to the following other HD:

HD 516	Guide to the use of low voltage harmonised cables
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In all cases a reference to another EN or HD implies the latest edition of that document

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1. Scope

This particular part (Part 9) of the HD details the particular specifications for polyvinyl chloride insulated single core non-sheathed cables for fixed wiring of rated voltage U_0/U 450/750V, intended for installation at low temperatures.

All cables shall comply with the appropriate requirements given in Part 1 and the individual types of cable shall each comply with the particular requirements of this Part 9.

NOTE: The overall dimensions of the cables of this Part of HD 21 have been calculated in accordance with EN 60719.

2. Single core non-sheathed cable with rigid conductor for installation at low temperatures

2.1 Code designation

H07V3-U, for cables with solid conductors;
H07V3-R, for cables with stranded rigid conductors.

2.2 Rated voltage

450/750V.

Note: 600/1000V when this cable is used in fixed installations, with mechanical protection, within switchgear and controlgear : see HD 516.

2.3 Construction

2.3.1 Conductor

Number of conductors : 1
The conductors shall comply with the requirements of HD 383:
Class 1 for solid conductors;
Class 2 for stranded conductors.

2.3.2 Insulation

The insulation shall be polyvinyl chloride compound of Type TI 4, applied around the conductor.

The insulation thickness shall comply with the specified value given in Part 9, Table I, column 3.

The insulation resistance shall be not less than the value given in Part 9, Table I, column 6.