

This document is a preview generated by EVS

**Ristseosega isoleeritud kaablid nimipingel 450/750 V
(k.a) või üle selle. Osa 4: Juhtmed ja paindkaablid
(nöörkaablid)**

Cables of rated voltages up to and including 450/750 V and having crosslinked insulation - Part 4: Cords and flexible cables

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-HD 22.4 S4:2004 sisaldb Euroopa standardi HD 22.4 S4:2004 ingliskeelset teksti.	This Estonian standard EVS-HD 22.4 S4:2004 consists of the English text of the European standard HD 22.4 S4:2004.
Standard on kinnitatud Eesti Standardikeskuse 16.11.2004 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 16.11.2004 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kätesaadavaks tegemise kuupäev on 10.03.2004.	Date of Availability of the European standard text 10.03.2004.
Standard on kätesaadav Eesti standardiorganisatsionist.	The standard is available from Estonian standardisation organisation.

ICS 29.060.20

Standardite reproduutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Estonia; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute Estonian Standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: +372 605 5050; E-mail: info@evs.ee

English version

**Cables of rated voltages up to and including 450/750 V
and having crosslinked insulation
Part 4: Cords and flexible cables**

Conducteurs et câbles isolés avec
des matériaux réticulés de tension
assignée au plus égale à 450/750 V
Partie 4: Câbles souples

Starkstromleitungen mit vernetzter
Isolierhülle für Nennspannungen bis
450/750
Teil 4: Flexible Leitungen

This Harmonization Document was approved by CENELEC on 2004-02-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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

This edition 4 of HD 22.4 has been prepared by Technical Committee CLC/TC 20, Electric cables. It provides a full updating of edition 3, including incorporation of amendment No 1, and introduces other improvements.

HD 22.4 S4 is related to IEC 60245-4 (1994), but is not directly equivalent.

HD 22 now has the following parts:

- HD 22.1 S4 - General requirements
- HD 22.2 S3 - Test methods
- HD 22.3 S4 - Heat resistant silicone rubber insulated cables
- HD 22.4 S4 - Cords and flexible cables
- HD 22.5 - (Spare)
- HD 22.6 S2 - Arc welding cables
- HD 22.7 S2 - Cables with increased heat resistance for internal wiring for a conductor temperature of 110 °C
- HD 22.8 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 S2 - Cords for applications requiring high flexibility
- HD 22.15 S1 - Multicore cables insulated and sheathed with heat resistant silicone rubber
- HD 22.16 S1 - Water resistant polychloroprene or equivalent elastomer sheathed flexible cables

The draft Harmonisation Document was submitted to the Unique Acceptance Procedure and approved by CENELEC as HD 22.4 S4 on 2004-02-01.

The following dates were fixed:

- latest date by which the existence of the HD has to be announced at national level (doa) 2004-08-01
- latest date by which the EN has to be implemented at national level by publication of a harmonised national standard or by endorsement (dop) 2005-02-01
- latest date by which the national standards conflicting with the HD have to be withdrawn (dow) 2006-02-01

Contents

	Page
1 Scope	4
2 Normative references	4
3 Ordinary EPR insulated and EPR sheathed cord and flexible cable	4
3.1 Code designation.....	4
3.2 Rated voltage	4
3.3 Construction	5
3.4 Tests	5
3.5 Guide to use (informative).....	5
4 Ordinary polychloroprene or other equivalent synthetic elastomer sheathed cord and flexible cable	8
4.1 Code designation.....	8
4.2 Rated voltage	8
4.3 Construction	9
4.4 Tests	9
4.5 Guide to use (informative).....	9
5 Heavy polychloroprene or other equivalent synthetic elastomer sheathed flexible cable.....	13
5.1 Code designation.....	12
5.2 Rated voltage	12
5.3 Construction	12
5.4 Tests	13
5.5 Guide to use (informative).....	13
6 Heavy polychloroprene or other equivalent synthetic elastomer sheathed flexible cable with more than five conductors (Multicore cables).....	18
6.1 Code designation.....	18
6.2 Rated Voltage	18
6.3 Construction	18
6.4 Tests	20
6.5 Guide to use (informative).....	20
Annex A (normative) Special national conditions (normative)	23
Bibliography	24

1 Scope

This Part 4 of the HD details the particular specifications for EPR insulated and EPR or polychloroprene or other equivalent synthetic elastomer sheathed cords and flexible cables of rated voltages up to and including 450/750 V.

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

NOTE The overall dimensions of the cables in this part of HD 22 have been calculated in accordance with EN 60719.

2 Normative references

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

Publication	Year	Title
EN 50265-2-1	1998	Common test methods for cables under fire conditions - Test for resistance to vertical flame propagation for a single insulated conductor or cable Part 2-1 : Procedures - 1kW pre-mixed flame
EN 50334	2001	Marking by inscription for the identification of cores of electric cables
EN 50356	2002	Method of spark testing of cables
EN 60811 (series)		Insulating and sheathing materials of electric and optical cables - Common test methods
HD 383	1993	Conductors of insulated cables (Endorsing IEC 60228 and IEC 60228A)

Table 1 (Spare)

Table 2 (Spare)

3 Ordinary EPR insulated and EPR sheathed cord and flexible cable¹⁾

3.1 Code designation

H05RR-F

3.2 Rated voltage

300/500 V

¹⁾ This is similar to type 60245 IEC 57 up to 1,0 mm² but has modified requirements.