SLOVENSKI STANDARD
SIST HD 22.1 S2:1998/A17:1998

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Rubber insulated cables of rated voltages up to and including 450/750 V - Part 1: General requirements - Amendment A17

Rubber insulated cables of rated voltages up to and including 450/750 V -- Part 1: General requirements

Gummi-isolierte Leitungen mit Nennspannungen bis 450/750 V -- Teil 1: Allgemeine Anforderungen

Conducteurs et câbles isolés au caoutchouc, de tension assignée au plus égale à 450/750 V -- Partie 1: Prescriptions générales

Ta slovenski standard je istoveten z: **HD 22.1 S2:1992/A17:1995**

ICS:

29.060.20 Kabli Cables

SIST HD 22.1 S2:1998/A17:1998 **en**

HARMONIZATION DOCUMENT
DOCUMENT D'HARMONISATION
HARMONISIERUNGSDOKUMENT

HD 22.1 S2/A17

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ICS 29.060.20

Descriptors: See HD 22.1 S2:1992

English version

Rubber insulated cables of rated voltages up to and including 450/750 V Part 1: General requirements

Conducteurs et câbles isolés au caoutchouc, de tension assignée au plus égale à 450/750 V
Partie 1: Prescriptions générales

Isolierte Starkstromleitungen mit einer Isolierung aus Gummi mit Nennspannungen bis 450/750 V
Teil 1: Allgemeine Anforderungen

This amendment A17 modifies the Harmonization Document HD 22.1 S2:1992; it was approved by CENELEC on 1995-02-15. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this amendment 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 amendment 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

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

The text of the draft was submitted to the formal vote and was approved by CENELEC as amendment A17 to HD 22.1 S2:1992 on 1995-02-15.

The following dates were fixed:

- latest date by which the existence of the amendment has to be announced at national level (doa) 1995-09-01
- latest date by which the amendment has to be implemented at national level by publication of a harmonized national standard or by endorsement (dop) 1996-03-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 1996-03-01

For products which have complied with HD 22.1 S2:1992 and its amendments A11:1992, A12:1992, A13:1992, A14:1994, A15:1993, A16:1994 and A18:1995 before 1996-03-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1997-03-01.

Sub-clause 5.5.1

After the first sentence add the following type to the list of compounds:

"Type EM 4 for cables sheathed with vulcanised EVA or equivalent synthetic elastomer".

Table II

Add compound EM 4 as attached.

TABLE II

REQUIREMENTS FOR THE NON-ELECTRICAL TESTS FOR VULCANISED RUBBER SHEATH

1	2	3	4	5	6
Ref. No.	Test	Unit	Type of compound EM4	Test method described in	
				HD	Clause
1.	Tensile strength and elongation at break				
1.1	Properties in the state as delivered			505.1.1	9.2
1.1.1	Value to be obtained for the tensile strength: - median, min.	N/mm²	6.5		
1.1.2	Value to be obtained for the elongation at break: - median, min.	%	200		
1.2	Properties after ageing in air oven			505.1.2	8.1.3.1
1.2.1	Ageing conditions[3]: - temperature - duration of treatment	°C h	150 ± 3 10 x 24		
1.2.2	Values to be obtained for the tensile strength: - median, min. - variation[2], max.	N/mm² %	- ±30		
1.2.3	Value to be obtained for the elongation: - median, min. - variation[2], max.	% %	- ±30		
1.3	Properties after ageing in the air bomb			505.1.2	8.2
1.3.1	Ageing conditions: - temperature - duration of treatment	°C h	150 ± 3 7 x 24		
1.3.2	Value to be obtained for the tensile strength: - median, min. - variation[2], max.	N/mm² %	6.0 -		
1.3.3	Value to be obtained for the elongation at break: - median, min. - variation[2], max.	% %	- -30[1]		

TABLE II

REQUIREMENTS FOR THE NON-ELECTRICAL TESTS FOR VULCANISED RUBBER SHEATH
(concluded)

1	2	3	4	5	6
Ref. No.	Test	Unit	Type of compound EM4	Test method described in	
				HD	Clause
2.	Hot set test			505.2.1	9
2.1	Conditions of treatment:				
	- temperature	°C	250 ± 3		
	- time under load	min.	15		
	- mechanical stress	N/cm²	20		
2.2	Test requirements:				
	- max. elongation under load	%	100		
	- max. elongation after unloading	%	25		
3.	Bending test at low temperature			505.1.4	8.2
3.1	Test conditions:				
	- temperature	°C	-15 ± 2		
	- period of exposure		See HD 505.1.4 Sub-clause 8.2.3		
3.2	Results to be obtained		no cracks		
4.	Elongation test at low temperature			505.1.4	8.4
4.1	Test conditions:				
	- temperature	°C	15 ± 2		
	- period of exposure		see HD 505.1.4 Sub-clauses 8.4.4 and 8.4.5		
4.2	Results to be obtained:				
	- elongation without break minimum	%	30		
5.	Pressure test at high temperature			505.3.1	8.2
5.1	Test conditions:				
	- force exerted by blade				
	- K value : 1.0				
	- duration of heating under load	h	0.5		
	- temperature	°C	150 ± 2		
5.2	Result to be obtained:				
	- median of the depth of penetration max.	%	50		

(1) No limit for the positive tolerance.

(2) Variation is the difference between the median value after ageing and the median value without ageing, expressed as a percentage of the latter.

(3) Unless otherwise specified in the relevant cable specifications a rotating fan inside the oven is normally permissible when testing rubber compounds. However, in case of dispute, ageing shall be carried out in an oven which is designed to operate without a fan rotating inside it.