

SLOVENSKI STANDARD
SIST EN 50290-2-29:2002**01-september-2002****BUXca Yý U****SIST HD 624.9 S1:1997**

Communication cables - Part 2-29: Common design rules and construction - Cross-linked PE insulation compounds (Note: Applies only in conjunction with EN 50290-2-20)

Communication cables -- Part 2-29: Common design rules and construction - Cross-linked PE insulation compounds

Kommunikationskabel -- Teil 2-29: Gemeinsame Regeln für Entwicklung und Konstruktion - Vernetzte PE-Isolier-Mischungen

Câbles de communication -- Partie 2-29: Règles de conception communes et construction - PE réticulé pour enveloppes isolantes

Ta slovenski standard je istoveten z: EN 50290-2-29:2002**ICS:**

29.035.20	Účelom je definovať pravidlá pre návrh a konštrukciu plastických a gumových izolujúcich materiálov.	Plastics and rubber insulating materials
33.120.10	Koaxialni kabli. Valovodi	Coaxial cables. Waveguides

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EUROPEAN STANDARD

EN 50290-2-29

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2002

ICS 29.035.20; 33.120.10

Supersedes HD 624.9 S1:1997

English version

Communication cables
Part 2-29: Common design rules and construction –
Cross-linked PE insulation compounds

Câbles de communication
Partie 2-29: Règles de conception
communes et construction –
PE réticulé pour enveloppes isolantes

Kommunikationskabel
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für Entwicklung und Konstruktion -
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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 European Standard was prepared by a joint working group of the Technical Committees CENELEC TC 46X, Communication cables, and CENELEC TC 86A, Optical fibres and optical fibre cables.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50290-2-29 on 2001-11-01.

This European Standard supersedes HD 624.9 S1:1997.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2002-08-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2004-08-01

This European Standard has been prepared under the European Mandate M/212 given to CENELEC by the European Commission and the European Free Trade Association.

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1 Scope

This Part 2-29 of EN 50290 includes requirements for cross-linked PE insulation compounds used in communication cables.

It is to be read in conjunction with Part 2-20 of EN 50290.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

- | | |
|-------------------|--|
| EN 60811-1-1:1995 | Insulating and sheathing materials of electric and optical cables - Common test methods -- Part 1-1: General application - Measurement of thickness and overall dimensions - Tests for determining the mechanical properties (IEC 60811-1-1:1993) |
| EN 60811-1-2:1995 | Insulating and sheathing materials of electric cables - Common test methods Part 1-2: General application -- Thermal ageing methods (IEC 60811-1-2:1985 + corr. May 1986 + A1:1989) |
| EN 60811-1-3:1995 | Insulating and sheathing materials of electric and optical cables - Common test methods -- Part 1-3: General application - Methods for determining the density - Water absorption tests - Shrinkage test (IEC 60811-1-3:1993) |
| EN 60811-2-1:1998 | Insulating and sheathing materials of electric and optical cables - Common test methods -- Part 2-1: Methods specific to elastomeric compounds - Ozone resistance, hot set and mineral oil immersion tests (IEC 60811-2-1:1998) |
| EN 60811-4-2:1999 | Insulating and sheathing materials of electric and optical fibre cables - Common test methods -- Part 4: Methods specific to polyethylene and polypropylene compounds -- Section 2: Tensile strength and elongation at break after pre-conditioning Wrapping test after thermal ageing in air - Measurement of mass increase -- Long - term stability test - Test method for copper - catalysed oxidative degradation (IEC 60811-4-2:1990, mod.) |

3 Requirements

In case of specific applications, additional performances could be needed. Relevant test methods and requirements shall be included in the detail specifications of the cables.

Table 1 - Cross-linked PE insulation compounds

Characteristics		Test method	Unit	Values
1	Maximum rated temperature at cable for which the compound can be used		° C	90
2	Mechanical characteristics	EN 60811-1-1 9.1		
2.1	In state of delivery			
2.11	Tensile strength - median, min.		MPa	12,5
2.12	Elongation at break - median, min.		%	250
2.2	After ageing in air oven	EN 60811-1-2 8.1		
	Ageing conditions - temperature - duration		° C h	135 ± 3 10 x 24
2.21	Tensile strength - variation, max.		%	± 25
2.22	Elongation at break - variation, max.		%	± 25
3	Wrapping after ageing (see note 1)	EN 60811-4-2 clause 10		
	Ageing conditions - temperature - duration		° C h	150 ± 3 7 x 24
	Result to be obtained			No crack
4	Hot set	EN 60811-2-1 clause 9		
	Test conditions - temperature - time under load - mechanical stress		° C min N/mm ²	200 ± 3 15 0,2
	Result to be obtained - elongation under load, max. - elongation after cooling		% %	175 15
5	Shrinkage	EN 60811-1-3 clause 11		
	Test conditions - temperature - duration		° C h	130 1
	Result to be obtained - shrinkage, max.		%	4

NOTE 1 Only to be carried out if elongation at break cannot be done.

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