

SLOVENSKI STANDARD
oSIST prEN 50290-2-35:2016
01-maj-2016

Komunikacijski kabli - 2-35. del: Skupna pravila za snovanje in konstruiranje - Poliamidna zmes za oplaščenje

Communication cables - Part 2-35: Common design rules and construction - Polyamide sheathing compound

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Câbles de communication - Partie 2-35: Règles de conception communes et construction - Mélange pour gainage en polyamide

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ICS:

29.035.20	Plastični in gumeni izolacijski materiali	Plastics and rubber insulating materials
33.120.10	Koaksialni kabli. Valovodi	Coaxial cables. Waveguides

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**Communication cables - Part 2-35: Common design rules and
construction - Polyamide sheathing compound**

Câbles de communication - Partie 2-35: Règles de
conception communes et construction - Mélange pour
gainage en polyamide

To be completed

This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2016-06-17.

It has been drawn up by CLC/TC 46X.

If this draft becomes a European Standard, CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CENELEC in three official versions (English, French, German).
A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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See f75f3c9d3/sist-en-50290-2-35-2016

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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10 European foreword

11 This document (prEN 50290-2-35:2016) has been prepared by CLC/TC 46X, "Communication cables".

12 This document is currently submitted to the Enquiry.

13 The following dates are proposed:

- latest date by which the existence of this document has to be announced at national level (doa) dor + 6 months
- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dor + 12 months
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) dor + 36 months (to be confirmed or modified when voting)

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1 Scope

This Part 2-35 of EN 50290 gives specific requirements for Polyamide and Polyamide alloys to be used for the inner and outer sheathing of cables.

It is to be read in conjunction with Part 2-20 of EN 50290, the product standards EN 50288-7 and EN 61158 and other applicable product standards.

Using raw material and type test data as outlined in this standard, the raw material supplier will have sufficient data to demonstrate compliance and warrant that the material is suitable for the specified application.

Table 1 - Polyamide sheathing compound

Type	Maximum operating temperature
PA	90 °C

2 Normative references

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

EN 60811-401, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 401: Miscellaneous tests - Thermal ageing methods - Ageing in an air oven (IEC 60811-401).*

EN 60811-404, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 404: Miscellaneous tests - Mineral oil immersion tests for sheaths (IEC 60811-404)*

EN 60811-501, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 501: Mechanical tests - Tests for determining the mechanical properties of insulating and sheathing compounds (IEC 60811-501)*

EN 60811-605, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 605: Physical tests - Measurement of carbon black and/or mineral filler in polyethylene compounds (IEC 60811-605)*

EN 60811-606, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 606: Physical tests - Methods for determining the density (IEC 60811-606)*

EN 60811-607, *Electric and optical fibre cables - Test methods for non-metallic materials - Part 607: Physical tests - Test for the assessment of carbon black dispersion in polyethylene and polypropylene (IEC 60811-607)*

EN ISO 868, *Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868)*

EN ISO 62, *Plastics - Determination of water absorption (ISO 62)*

3 Compound requirements

The tests are to be carried out on granules or moulded plaques (or other suitable forms) produced from granules of the supplied compound. This data shall describe the general performance of Polyamide compounds. The data shall be provided by the compound supplier and therefore can be included in any supply specification of the raw material. Test methods, relevant requirements and limits are shown in Table 2. In the case of special applications, additional requirements could be specified.

4 Cable test requirements

The anticipated performance assumes standard cable design and conventional process technology and is specified in Table 3. In case of specific applications, additional requirements could be specified.

5 Health, Safety and Environmental Regulations

The materials are subject to Health, Safety and Environmental (HSE) requirements as defined in EN 50290-2-20. Any deviations or compliance failures must be identified by the raw material supplier and necessary corrective actions to be undertaken agreed with the cable maker.

Table 2 - Polyamide sheathing compound – physical properties on granules

	Characteristics ¹⁾	Test method	Unit	Value
1	Density (base polymer)	EN 60811-606	g/cm ³	<1,06
2	Hardness (Shore D, 15 s)	EN ISO 868	-	65-80
3	Moisture absorption (23°C; 50% HR)	EN ISO 62	%	<2,5
4	Water absorption (23 °C, in water)	EN ISO 62	%	<7
5	Carbon black content ²⁾	EN 60811-605	%	2,0 ± 0,5
6	Carbon black dispersion - agglomerate ²⁾	EN 60811-607	-	≤3
1) All values of Table 2 shall be provided by the compound supplier, see clause 3 2) Test is to be applied only for black compounds to be used for outer sheathings				

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