

Specification for

Festoon and temporary lighting cables and cords

Câbles et cordons électriques pour guirlandes
et éclairage temporaire — Spécifications

Kabel für Lichtketten und provisorische
Beleuchtung

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Cables and Insulation Standards Policy Committee (CIL/-) to Technical Committee CIL/20, upon which the following bodies were represented:

Aluminium Federation
 Association of Consulting Engineers
 Association of Manufacturers of Domestic Electrical Appliances
 British Approvals Service for Cables
 British Cable Makers Confederation
 British Plastics Federation
 British Steel Industry
 British Telecommunications plc
 Department of the Environment (Property Services Agency)
 Department of Trade and Industry (Consumer Safety Unit, CA Division)
 Electricity Supply Industry
 Engineering Equipment and Materials Users Association¹
 ERA Technology Ltd.
 Institution of Electrical Engineers
 London Regional Transport

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

Association of Manufacturers Allied to the Electrical and Electronic Industry (BEAMA Ltd.)
 British Electrical Systems Association (BEAMA Ltd.)
 British Non-ferrous Metals Federation
 Chartered Institution of Building Services Engineers
 Electrical Installation Equipment Manufacturers Association (BEAMA Ltd.)
 Engineering Industries Association
 GAMBICA (BEAMA Ltd.)
 Institution of Incorporated Executive Engineers
 Lighting Industry Federation Ltd.
 London Underground Ltd.
 National Association of Lift Makers
 Portable Electric Tool Manufacturers Association
 Transmission and Distribution Association (BEAMA Ltd.)

This British Standard, having been prepared under the direction of the Cables and Insulation Standards Policy Committee, was published under the authority of the Standards Board and comes into effect on 28 June 1991

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The following BSI references relate to the work on this standard:
 Committee reference CIL/20
 Draft for comment 90/24189 DC

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Amendments issued since publication

Amd. No.	Date	Text affected

Amendment No. 1
published and effective from 1 May 1992
to BS 6726 : 1991

Specification for festoon and temporary
lighting cables and cords

Revised text

AMD 6939
May 1992

Contents

Under 'Tables' renumber tables 12 to 17 as 13 to 18 respectively and insert entry for new table 12 as follows.

'12 PVC-insulated non-sheathed cord, 300/300 V single core.'

AMD 6939
May 1992

Foreword

After paragraph 4, insert the following.

'Amendment No. 1 implements AM 1 to HD 21.8 S1 in respect of dual layer insulation for 300/300 V lighting chains.'

AMD 6939
May 1992

Clause 1. Scope

In the list of types of cables and cords, for item (g) delete the second 'sheathed' in the title.

At the end of the list, insert the following.

'(h) Table 12. PVC-insulated non-sheathed cord, 300/300V single core.'

AMD 6939
May 1992

Clause 4.1 General

At the end of the second sentence, after 'surface', insert the following.

'except for cores to table 12 which shall be coloured as specified.'

AMD 6939
May 1992

Clauses 14 to 17

In clauses 14 to 17 delete the existing references to 'tables 8 to 11' and substitute 'tables 8 to 12', and delete the references to 'table 13' and substitute 'table 14'.

AMD 6939
May 1992

15.3 Thickness

Insert a new second paragraph as follows.

'For cores in table 12, the combined thickness of inner and outer layer of insulation shall comply with the overall thickness specified in table 12 but at no point shall the thickness of either layer be less than 0.2 mm. The minimum and mean overall thickness shall comply with the values specified in table 12.'

AMD 6939
May 1992

New table 12

Insert the following new table 12.

Table 12. PVC-insulated non-sheathed cord, 300/300 V single core					
Harmonized code designation. H03VH7-H					
Construction Plain annealed copper conductor. PVC insulation type T12 applied by dual extrusion around the conductor. The outer layer shall be a contrasting colour to that of the inner layer, but adhering to the inner layer.					
Colour for core identification. Bi-colours shall not be used. Preferred outer layer colour: green.					
Nominal cross-sectional area of conductor	Class of conductor	Thickness of each layer of insulation Minimum value	Overall thickness		Insulation resistance at 70 °C Minimum value
			Minimum value	Mean value	
mm ²		mm	mm	mm	MΩ·km
0.5	6	0.2	0.6	0.7	0.014
0.75 ¹⁾	6	0.2	0.6	0.7	0.012
¹⁾ Denotes National type.					

AMD 6939
May 1992

Tables 12 to 17

Renumber existing tables 12 to 17 as 13 to 18 respectively.

Table 13. List of tests applicable to cables and cords in section three

Delete table 13 and substitute the new table 14 as follows.

Table 14. List of tests applicable to cables and cords in section three						
Clause number	Test description	Table number				
		8	9	10	11	12
<i>Electrical tests</i>						
7.1	Conductor resistance	x	x	x	x	x
7.2	Voltage test on complete cable at 2 kV	x	x	x	x	x
7.3	Voltage test on cores at 2000 V	—	x	x	—	—
7.3	Voltage test on cores at 1500 V	—	x	—	x	—
7.4	Insulation resistance at 70°C	x	x	x	x	x
7.5	Long term resistance of insulation to d.c.	x	x	x	x	x ²⁾
7.6	Absence of faults on insulation	x	x	x	x	x ²⁾
<i>Constructional and dimensional tests</i>						
6.1	Check on construction	x	x	x	x	x
15.3	Measurement of insulation thickness	x	x	x	x	x
17.3	Measurement of sheath thickness	—	x	x	x	—
6.2	Measurement of overall dimensions	x	x	x	x	x ²⁾
<i>Mechanical properties of insulation</i>						
15	Tensile strength before ageing	x	x	x	x	x ²⁾
	Elongation at break before ageing	x	x	x	x	x ²⁾
	Tensile strength after ageing in air	x	x	x	x	x ²⁾
	Elongation at strength after ageing in air	x	x	x	x	x ²⁾
	Loss of mass test	x	x	x	x	x ²⁾
	Cold bend test	x	x	x	x	x ²⁾
	Heat shock test	x	x	x	x	x ²⁾
	Hot pressure test	x	—	—	—	x ²⁾
<i>Mechanical properties of sheath</i>						
17	Tensile strength before ageing	—	x	x	x	—
	Elongation at break before ageing	—	x	x	x	—
	Tensile strength after ageing in air	—	x	x	x	—
	Elongation at break after ageing in air	—	x	x	x	—
	Loss of mass test	—	x	x	x	—
	Hot pressure test	—	x	x	x	—
	Cold bend test	—	x	x	x	—
	Cold impact test	—	x	x	x	—
	Heat shock test	—	x	x	x	—
<i>Mechanical strength of complete cables</i>						
8	Flexing test	—	x ¹⁾	x	x	—
9	Test under fire conditions	x	x	x	x	x

1) Table 9(b) only.

2) Because of the simultaneous extrusion of the same compound for both layers of insulation, the composite layer is tested as one layer and evaluated accordingly.

NOTE. 'x' indicates that the particular test is applicable to the cables in the table shown at the head of each column.

AMD 6939
May 1992

Clause B.1.2 Spark test

In line 2, delete 'table 14' and substitute 'table 15'.

AMD 6939
May 1992

Clause B.2.3.1 Procedure

In the last line, delete 'table 15' and substitute 'table 16'.

AMD 6939
May 1992

Clause B.2.4.2 Recommended test criteria

In the last line of the note, delete 'table 17' and substitute 'table 18'.

AMD 6939
May 1992

Appendix C. Electrical tests

In appendix C, delete the existing references to 'table 12' and substitute 'table 13' (in all 16 places).

Amendment No. 2
published and effective from 15 September 1993
to BS 6726 : 1991

**Specification for festoon and temporary lighting
cables and cords**

Revised text

AMD 7888
September 1993

Foreword (as amended by Amendment No. 1)

After paragraph 4, insert the following:

'The standard was amended to align with amendments to HD 22:

Amendment 8 to HD 22.1

Amendment 3 to HD 22.2'

Amendment 1 to HD 22.8

Amendment 2 to HD 22.8

IP 7888
September 1993

Clause 5.5 Continuity of marks

Delete the existing text and substitute the following:

'Each specified mark shall be regarded as continuous if the distance between the end of the mark and the beginning of the next identical mark does not exceed:

(a) 550 mm if the marking is on the outer sheath of the cable or cord;

(b) 275 mm if the marking is:

(i) on the insulation of an unsheathed cable or cord;

(ii) on the insulation of a sheathed cable or cord;

(iii) on a tape within a sheathed cable or cord.

NOTE. A 'specified mark' is any mandatory mark covered by this standard, or the optional CENELEC common marking as specified in 5.2.'

AMD 7888
September 1993

Table 1. Load to be used and diameter of pulleys for flexing test

Delete the existing table and substitute the following:

Table 1. Load to be used and diameter of pulleys for flexing test		
Nominal cross-sectional area of conductors	Load	Diameter of pulleys
mm ²	kg	mm
0.5	0.5	60
0.75	1.0	80
1.5	1.0	120
2.5	1.5	120

AMD 7888
September 1993

Clause 10 Conductors

In 10.1 delete paragraph 2 and insert the following:

'NOTE. An optional separator may be applied over the conductor'.

AMD 7888
September 1993

Clause 11.1 Type of insulation

In line 1 delete 'EI1' and substitute 'EI 4'.

In line 2 delete 'BS 6899' and substitute 'BS 7655 : Section 1.1'

AMD 7888
September 1993

Clause 11.2 Application

Delete paragraph 1 and substitute the following:

'The insulation shall be applied in a single layer by extrusion'.

AMD 7888
September 1993

Clause 13.1 Types of sheath

In line 1 delete 'BS 6899' and substitute 'BS 7655 : Section 2.1 or Section 2.3'.

AMD 7888
September 1993

Clause 13.4 Marking

Delete the sub-clause entirely and substitute the following:

'Type EM 2 sheathed cables whose properties are given in tables 4a, 4c and 5, shall be distinguished by means of the marking 'RN' printed, embossed or indented onto the sheath.'

AMD 7888
September 1993

Table 3. Rubber-insulated and sheathed cable, 300/500 V flat twin

In line 2 under 'Construction' in (a) delete 'Rubber insulation type EI1.' and substitute 'Rubber insulation type EI 4.'

In line 2 under 'Construction' in (b) delete 'Rubber insulation type EI1.' and substitute 'Rubber insulation type EI 4.'

Table 4. Rubber-insulated and sheathed cord, 300/500 V single core and flat twin

In line 3 under 'Construction', in (a) delete 'Rubber insulation type EI1.' and substitute 'Rubber insulation type EI 4.'

In line 2 under 'Construction', in (b) delete 'Rubber insulation type EI1.' and substitute 'Rubber insulation type EI 4.'

Delete 4(c) and substitute the following:

Table 4 (concluded)							
(c) Twin cord, spaced cores							
Harmonized code designation. HO5RNH2—F.							
Construction							
Tinned or plain annealed copper conductor (see 10.1).							
Separator required for plain conductors, optional for tinned.							
Rubber insulation type EI 4.							
Two cores laid parallel and sheathed with type EM2.							
The sheath shall fill the spaces between the cores, thus forming a filling but it shall be possible to remove the sheath easily without damage to the cores.							
The shape of the cable shall be compatible with the type of filling used.							
The distance between the centres of the conductors shall be within the limits specified in the table below.							
Core colours. Blue and brown.							
Colour of sheath. Preferred colours green or black.							
Number and nominal cross-sectional area of conductor	Class of conductor	Radial thickness of insulation	Radial thickness of sheath	Distance between centres of conductors		Mean overall dimensions	
				Mean lower limit	Mean upper limit	Lower limit	Upper limit
mm ²		mm	mm	mm	mm	mm	mm
2 × 1.5	5	0.8	0.8	6.7	7.0	5.0 × 13.0	6.0 × 14.0
2 × 2.5	5	0.8	0.8	6.7	7.0	5.0 × 13.0	6.0 × 14.0

Table 5. Rubber-insulated and sheathed cord, 300/500 V circular twin

In line 2 under 'Construction', delete 'Rubber insulation type EI1.' and substitute 'Rubber insulation type EI 4.'