

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

### AMENDMENT 1 AMENDEMENT 1

**Power cables with extruded insulation and their accessories for rated voltages from 1 kV ( $U_m = 1,2$  kV) up to 30 kV ( $U_m = 36$  kV) –  
Part 1: Cables for rated voltages of 1 kV ( $U_m = 1,2$  kV) and 3 kV ( $U_m = 3,6$  kV)**

**Câbles d'énergie à isolant extrudé et leurs accessoires pour des tensions assignées de 1 kV ( $U_m = 1,2$  kV) à 30 kV ( $U_m = 36$  kV) –  
Partie 1: Câbles de tensions assignées de 1 kV ( $U_m = 1,2$  kV) et 3 kV ( $U_m = 3,6$  kV)**



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IEC Central Office  
3, rue de Varembe  
CH-1211 Geneva 20  
Switzerland  
Email: [inmail@iec.ch](mailto:inmail@iec.ch)  
Web: [www.iec.ch](http://www.iec.ch)

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Email: [csc@iec.ch](mailto:csc@iec.ch)  
Tél.: +41 22 919 02 11  
Fax: +41 22 919 03 00

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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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ELECTROTECHNIQUE  
INTERNATIONALE

## FOREWORD

This amendment has been prepared by IEC technical committee 20:Electric cables.

The text of this amendment is based on the following documents:

|              |                  |
|--------------|------------------|
| FDIS         | Report on voting |
| 20/1063/FDIS | 20/1069/RVD      |

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

**Table 2**

Replace the existing Table 2 with the following new table:

**Table 2 – Insulating compounds**

| Insulating compound                                                                                                                              |                                                                                  | Abbreviated designation |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------|
| a) <i>Thermoplastic</i>                                                                                                                          | Polyvinyl chloride intended for cables with rated voltages $U_0/U \leq 1,8/3$ kV | PVC/A*                  |
| b) <i>Cross-linked:</i>                                                                                                                          |                                                                                  | EPR                     |
| Ethylene propylene rubber or similar (EPM or EPDM)                                                                                               |                                                                                  | HEPR                    |
| High modulus or hard grade ethylene propylene rubber                                                                                             |                                                                                  | XLPE                    |
| Cross-linked polyethylene                                                                                                                        |                                                                                  |                         |
| * Insulating compound based on polyvinyl chloride intended for cables with rated voltages $U_0/U = 3,6/6$ kV is designated PVC/B in IEC 60502-2. |                                                                                  |                         |

## 11 Metallic sheath

*Replace the existing text by the following new text:*

### 11.1 Lead sheath

The sheath shall consist of lead or lead alloy and shall be applied as a reasonably tight-fitting seamless tube.

The nominal thickness shall be calculated using the following formula:

$$t_{pb} = 0,03 D_g + 0,7$$

where

$t_{pb}$  is the nominal thickness of lead sheath, in millimetres;

$D_g$  is the fictitious diameter under the lead sheath, in millimetres (rounded to the first decimal place in accordance with Annex B).

In all cases, the smallest nominal thickness shall be 1,2 mm. Calculated values shall be rounded to the first decimal place (see Annex B).

### 11.2 Other metallic sheaths

Under consideration.

## 13.3 Thickness

*Replace the existing text in paragraphs 3 and 4 by the following new text:*

The nominal thickness shall be not less than 1,4 mm for single-core cables and not less than 1,8 mm for multicore cables.

### 16.5.3 Requirements for non-metallic sheaths

*Replace the existing text by the following new text:*

The minimum thickness of the non-metallic sheath shall not fall below 80 % of the nominal value by more than 0,2 mm, i.e:

$$t_m \geq 0,8t_n - 0,2$$

## Table 17

*Replace the existing title of Table 17 with the following new title:*

**Table 17 – Test requirements for particular characteristics of various cross-linked insulating compounds**