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INTERNATIONAL STANDARD

AMENDMENT 1

Heating cables with a rated voltage up to and including 300/500 V for comfort heating and prevention of ice formation

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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AMENDMENT 1

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Amendment 1 to IEC 60800:2021 has been prepared by IEC technical committee 20: Electric cables.

This amendment constitutes editorial improvements, and some technical modifications to a selection of tests and requirements.

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

Draft	Report on voting
20/2288/FDIS	20/2294/RVD

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

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications/.

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– reconfirmed,
– withdrawn, or
– revised.

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2 Normative references

Add the following new normative reference to the existing normative references:

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

4 Mechanical classification

Replace the second paragraph the with following new paragraph:

The class of any heating cable is determined by its performance as measured against the requirements in 8.2.7, 8.2.8 and 8.2.14.

6 Requirements for installation instructions

Replace item j) with the following new item j):

j) maximum sheath temperature;

8.2.7.2 Class M1: Heating cables intended for installation with low risk of mechanical damage

Replace the third paragraph with the following new paragraph:

The outer layer of the sample shall have no visible cracks when examined with normal vision.

8.2.8 Cold impact test

Replace existing temperature value: (−5 ± 2) °C

with the following new temperature value (5 ± 2) °C

Replace the tenth paragraph with the following new paragraph:

The outer layer of the sample shall have no visible cracks when examined with normal vision.

8.2.9 Cold bend test

Replace the fourth paragraph with the following new paragraph:

The outer layer of the sample shall have no visible cracks when examined with normal vision.

8.2.10 Ageing test for insulation

Replace the last paragraph with the following new paragraph:

The median elongation at break shall be not less than 150 %, before and after ageing.

8.2.11 Ageing test for non-metallic sheath

Replace the existing content of 8.2.11 with the following new content:

If provided, the sheath shall be aged in a heating cabinet in accordance with IEC 60811-401. Unaged and aged samples shall be tested for tensile strength and elongation at break in accordance with IEC 60811-501. The material shall pass the following test method.

The ageing shall be performed for 14 days at (110 ± 2) °C. The median value for the tensile strength of the unaged test pieces shall be not less than 10,0 MPa. The median value for the elongation at break of the unaged test pieces shall be not less than 100 %.

The median of the tensile strength and elongation at break on the aged test pieces shall not vary by more than ±25 % from the median values of the unaged test pieces.

8.2.13 Weathering and UV resistance test

Replace the existing content of 8.2.13 with the following new content:

This test is to determine the UV stability of the outer non-metallic sheathing material of the heating cable in the condition as manufactured. This is done by means of measuring tensile strength and elongation at break in the condition as manufactured and after exposure to ultraviolet light and water.

Heating cables having a continuous metal sheath with no outer non-metallic sheath shall be exempted from this test.

The test is limited to applications where heating cables are exposed to sunlight or to other sources of UV-radiation.

Two test methods are described, one based on ISO 4892-3, given in 8.2.13 and a test method given in Annex A, which is based on ISO 4892-2.

NOTE 1 The test methods described are considered to give comparable results.

NOTE 2 Additional information on weathering and UV resistance testing can be found in ISO 4892-1 [6] and ISO 4892-2 [7].

The test used shall be agreed between the manufacturer and the customer and certifying agency as applicable.