

EU RO Mutual Recognition Technical Requirements

ELECTRIC CABLES – HEATING CABLES	Version	0.5
	Adoption Date	1 January 2023
	Application Date	1 July 2023
	Tier	2
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1. PRODUCT DESCRIPTION

1.a *General description of the product*

Heating cables for electrical resistance trace heating systems.

1.b *Application limitations*

Heating cables used typically for direct and storage heating, snow melting and frost protection of pipes.

1.c *Intended use*

See 1.b

1.d *System context*

See 1.b.

2. DESIGN EVALUATION

2.a *Engineering evaluation requirements*

2.a i. **Technical Requirements**

Heating cables shall be constructed in accordance with IEC Publications: IEC 60800 or IEC 62395-1 and 2 for applications in non-explosive atmospheres, IEC 60079-30-1 and 2 for applications in explosive atmospheres.

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2.a.ii. Technical documents to be submitted

Technical specifications and drawings describing:

- The types and temperature range of heating cables for which approval is requested, to show compliance with the relevant requirements;
- Explanations of the different heating cable type description;
- IEC publications applied;
- Material designations according to IEC standards.

Manufacturer shall submit the following information about heating cable design standard:

- Voltage and temperature range;
- Applied materials;
- Drawing of heating cable construction.

2.b Type testing requirements

Heating cables shall be tested in accordance with IEC Publications:

- IEC 60800 or IEC 62395-1 and 2 for applications in non-explosive atmospheres;
- IEC 60079-30-1 and 2 for applications in explosive atmospheres;

At the option of the manufacturer for the concerned type of heating cable, additional type tests shall be in accordance with:

- IEC 60754-1/2 (halogen free);
- IEC 61034-1/2 (low smoke);
- IEC 60684-2 (fluorine content).
- Exposure to salt mist & solar radiation (Russian Register Rules for Technical Supervision, Part IV, § 10.7.15.11 & 12)

Test specimens shall be taken from the production line or from stocks†. Tests shall be carried out in the presence of the EU RO Surveyor. In cases where the tests are conducted at Nationally Accredited Laboratories, the presence of the EU RO surveyor may be omitted†.

† For further clarification of witnessing of tests and sampling the test specimen(s), refer to paragraphs 6, 7 and 8 of the EU RO "Design Evaluation Scheme" procedure (Appendix

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V of EU RO Framework Document for the Mutual Recognition of Type Approval found on <https://www.euromr.org/technical-requirements>)

2.c Type testing requirement for certificate renewal

The manufacturer is to notify the RO of any modification or changes to the manufacturing specifications that may affect the MR TA to be renewed.

3. PRODUCTION REQUIREMENTS

3.a. General Requirements

Refer to EU RO "Product Quality Assurance (PQA)" procedure (Appendix VI of EU RO Framework Document for the Mutual Recognition of Type Approval).

3.b Special Requirements

Continuous in-process inspections as well as intermediate testing during production shall be carried out according to the applicable IEC standard for the concerned heating cable.

4. MARKING REQUIREMENTS

The heating cable shall be marked in compliance with the marking requirements of the applicable IEC standard for the concerned cable.

5. TYPE APPROVAL CERTIFICATE CONTENT

The EU RO MR Type Approval Certificate shall contain the minimum information as defined in the "EU RO Framework Document for the Mutual Recognition of Type Approval" - see Appendix I EU RO MR Type Approval Certificate Information.

The following information is specifically applicable to products relevant to this technical requirement and shall be included on the relevant EU RO MR Type Approval Certificate:

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- (a) Description, specification, construction, range. Listing range of all approved heating cable variants in certificate;
- (b) Applicable Standards with their date of issue, including those applied at the option of the manufacturer (halogen free, low smoke, fluorine content etc.);
- (c) Test reports;
- (d) Limitations.

6. APPROVAL DATE AND REVISION NUMBER

Date	Revision	Comment
2013-04-30	0.0	Accepted by Advisory Board
2014-01-31	0.1	Removed word 'Shall' from 2.b (c) (CRF010) Reference to EU RO Framework Document for the Mutual Recognition of Type Approval added.
2015-01-31	0.2	CRF018 – Revision to par. 2.a.ii - Test results to be in English; CRF020 – Revision to par. 5 - 'Type Approval Certificate Content'.
1 April 2016	0.3	CRF025 – Updated to new MR TR document format incl. par. 8; CRF026/026a – Witness testing & control of test specimen; CRF028 – addition of 6 month application clause.
1 Jan 2023	0.5	Added para 2.c. Added para. 9 (ref. 21030_)

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7. BACKGROUND INFORMATION / REFERENCES

- a) IEC 60800 or IEC 62395-1 and 2 for applications in non-explosive atmospheres;
- b) IEC 60079-30-1 and 2 for applications in explosive atmospheres;
- c) IEC 60332-1 according to type;
- d) IEC 60754-1/2 (halogen free);
- e) IEC 61034-1/2 (low smoke);
- f) IEC 60684-2 (fluorine content);
- g) EU RO Framework Document for the Mutual Recognition of Type Approval.

8. MAINTENANCE / CLARIFICATION OF TECHNICAL REQUIREMENTS

Anyone wishing to propose changes to this document or request clarification of technical issues should contact the EU RO MR Group Secretariat in the first instance: Secretariat@euomr.org.

Review and approval of change requests shall follow the EU RO MR Maintenance Process detailed in the EU RO Framework Document for the Mutual Recognition of Type Approval: <http://www.euomr.org/Guidance%20for%20Mutual%20Recognition>.

9. LEGAL PROVISIONS / COPYRIGHT

- a) Underlying legal provisions in accordance with EU RO Framework Document for the Mutual Recognition of Type Approval;
- b) Copyright © 2022. All EU RO MR Group rights reserved. For a list of EU RO MR Group members please see <https://www.euomr.org/about-us>.
(The year is either the year of the inclusion of the copyright notice, 2022 for existing TRS, or the year of the adoption of any new TR.)

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