

EU RO Mutual Recognition Technical Requirements

THERMAL INSULATION OF ORGANIC FOAMS FOR PIPING	Version	0.1
	Adoption Date	1 April 2016
	Application Date	1 October 2016
	Tier	4
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1. PRODUCT DESCRIPTION

1.a General description of the product

These technical requirements apply to thermal insulation of organic foams (hereinafter referred to as 'insulation') used for piping and ventilation ducts penetrating the cargo spaces, mail rooms, baggage rooms and refrigerated compartments of service spaces, as well as for pipe fittings for cold service systems (refrigeration systems and chilled water piping for air-conditioning systems). Insulation can be of the built-up (fabricated in place) or composite design.

1.b Application limitations

- a) The application being limited to piping and ventilation ducts penetrating the cargo spaces, mail rooms, baggage rooms, refrigerated compartments of service spaces and insulation of pipe fittings for cold service systems;
- b) Insulation of piping and ventilation ducts penetrating other areas such as accommodation, service spaces and machinery spaces and insulation of piping for hot and cold sanitary water is outside the scope of the Technical Requirement.

1.c Intended use

The insulation intended to be used in the applications mentioned in 1.b.

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1.d System context

Refer to the item 1.c

2. DESIGN EVALUATION

2.a Engineering evaluation requirements

2.a i. Technical Requirements

- a) Insulation of refrigerating pipes shall be protected against absorption of moisture or to be moisture-resistant;
- b) Materials suitably resistant to flame spread, effective protection against penetration of water vapour;
- c) Exposed surfaces of vapour barriers and adhesives used in conjunction with insulation shall have low flame-spread characteristics;
- d) Insulation materials containing asbestos are prohibited.

2.a.ii. Technical documents to be submitted

IMPORTANT: The English Language shall be used for all submitted documents.

- a) Details of the proposed insulating and lining materials. The physical, thermal and fire properties of the built-up or composite system;
- b) Details of all materials to be used in the manufacture of insulation, including blowing agent utilised.

2.b Type testing requirements

The following type tests shall be conducted in accordance with the indicated standard (or recognised equivalent standard) to verify arrangement and design:

- a) Thermal resistance, ISO 8301;
- b) Closed Cell Content, ISO 4590;
- c) Flame spread characteristics, FTP Code 2010 Annex 1 Part 5;
- d) Smoke and toxicity, FTP Code 2010 Annex 1 Part 2;
- e) Maximum calorific value, ISO 1716;

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- f) Density, ISO 845;
- g) Water vapour penetration, EN 12086.

Test specimens shall be selected from production line or at random from stocks†. Tests shall be carried out in the presence of the EU RO Surveyor. In cases where the tests are conducted by Nationally Accredited Laboratories, the presence of the EU RO's 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 V of EU RO Framework Document for the Mutual Recognition of Type Approval found on <http://www.euromr.org/Guidance%20for%20Mutual%20Recognition>)

3. PRODUCTION REQUIREMENTS

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

4. MARKING REQUIREMENTS

Manufacturers of the approved equipment are, in principle, to mark the product before shipment for identification of approved equipment as per referenced standard. In addition, and as a minimum, the following items to be marked at the suitable place:

- a) Manufacturer's name or trade mark;
- b) Type designation under which the product is type approved.

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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*.

6. APPROVAL DATE AND REVISION NUMBER

Date	Revision	Comment
2015-01-31	0.0	Accepted by EU RO MR Advisory Board
1 April 2016	0.1	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.

7. BACKGROUND INFORMATION / REFERENCES

- EU RO Framework Document for the Mutual Recognition of Type Approval;
- European Union Regulation (EC) No. 842/2006;
- ISO 8301;
- ISO 4590;
- FTP Code 2010;
- ISO 1716;
- ISO 845;
- EN 12086.

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>.

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