

Procedures for Approval of New Thermal Insulation Product

1. For using any thermal insulation product of buildings in Bahrain, Manufacturers or their agents/dealers (if the manufacturer has no CR -Commercial Registration- in Bahrain) should submit Thermal Insulation System Approval Form (Attached) with the following documents:
 - a. Valid CR (Commercial Registration Certificate) for the applicant.
 - b. Authorization from the manufacturer, if the applicant is not the manufacturer, confirming that the applicant is authorized to get the required approvals from the concerned authorities.
 - c. Approval Certificate for the thermal insulation product from Directorate of Civil Defense.
 - d. Product photo/cross-section, specifications, catalogues/brochures.
 - e. Test report from an independent testing laboratory for the thermal conductivity of the product. Accreditation (as per ISO-17025) is required from the laboratory in the scope of thermal conductivity test. The tolerance error (Uncertainty measurement) of the test shall be mentioned in the test report. The test to be conducted under the mean temp of 35°C & 60% of RH base on the one of the standards
 - Method-1: Guarded Hot Plate (ISO 8302 / ASTM C177)
 - Method 2 : Heat Flow Meter (ISO 8301/ ASTM C518)
 - Method 3: Guarded Hot Box Method (ISO 8990 / ASTM C1363)
2. Minimum two samples are required to be tested. Test results should include the details as per the attached TEST RESULTS sheet (**Attached**).
3. Applicant should submit the original test report & test results signed by the authorized official of the testing laboratory with their official stamp. Originals will be returned to the applicant after verification.
4. Applicant should submit a sample of the product with clear identification labels.
5. Thermal Insulation Unit in the Electricity & Water Conservation Directorate (EWCD), shall study the submittals & evaluate the suitability of the product for thermal insulation of walls/roof of buildings in Bahrain. They shall calculate the thermal transmittance (U-Value) for the wall or the roof using the material or the system based on the thermal conductivity or thermal resistance values given in the test results and satisfy that the value obtained meets the requirement laid down in the thermal insulation regulations.
6. Issue a certificate of approval signed by the Chief, Electricity Conservation, to the applicant.
7. The TIU reserves the right in the future to request additional documents and to withdraw its approval of the system/material.

Thermal Insulation Product Application Form

<u>Product Name:</u>		
<u>Application for:</u>	<input type="checkbox"/> Wall	<input type="checkbox"/> Roof	<input type="checkbox"/> Other.....

1. Applicant Information

<u>Applicant Details:</u>	Name of Establishment:		
	Address:		
	Contact Person:		
	Designation:		Mobile No.:
	Tel:	Fax:	E-mail:
<u>Manufacturer Details:</u>	Name of Manufacturer:		
	Address:		
	Contact Person:		
	Designation:		Mobile No.:
	Tel:	Fax:	E-mail:

2. Applicant's Undertaking and Commitments

<p>2.1 The Applicant hereby agrees to comply with the requirements of the Thermal Insulation order of Bahrain.</p> <p>2.2 The Applicant hereby undertakes to support the Thermal Insulation Unit (TIU), provide any information related to this product as requested by the TIU, and allow authorized person to carry inspection and sampling whenever needed at the site where the products are installed / stored.</p> <p>2.3 The Applicant, upon approval of this system, undertakes to exert all effort to ensure that the product remain in compliance with the regulations of Bahrain and in accordance with the relevant Standard Specifications.</p> <p>2.4 The TIU reserves the right in the future to request additional documents and to withdraw its approval of the product.</p>	
Authorized Stamp	Name:
	Designation:
	Date:
	Signature:

3. Required Documents:

<input type="checkbox"/> Valid Registration Certificate (CR)	<input type="checkbox"/> Mfg authorization letter	<input type="checkbox"/> Product Description / Photo / Cross-section (one page)
<input type="checkbox"/> Product catalogues / brochures	<input type="checkbox"/> Thermal Test Report	<input type="checkbox"/> U-value calculation
<input type="checkbox"/> Civil Defense Certificate	<input type="checkbox"/> Sample	<input type="checkbox"/> Display Board (May required after approval)
<u>Price per unit of the product or per square meter of the installation:</u>	_____ BD / _____	
<u>Remarks:</u>		

4. Electricity & Water Authority Approval

Date Approved	
Authorized Signature and Stamp	
Remarks	

TEST RESULTS

Name & address of Testing Lab/Institute:

Test Request by

Sample Description

Date of Sampling

Date of Receiving Sample

Date Tested

Test Method

Testing Equipment Used

Product description	Measured density Kg/m ³	Tested Sample Thickness m	Mean Test Temperature °C	Thermal Conductivity (W/m.K)				Mean Thermal Conductivity (W/m.K)	
				Sample #1		Sample #2			
				Dry Condition @ test temp	@ 35°C, 60% RH*	Dry Condition @ test temp	@ 35°C, 60% RH*	Dry Condition @ test temp	@ 35°C, 60% RH*

* Uncertainty of measurement for thermal conductivity

Tested by (Name, Title & Signature):

Verified by: (Name, Title & Signature):

Stamp of Testing Lab