



### **Procedure of Registration for Thermal Insulation Products and Cool Roof:**

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 Product Approval Form (Attached) with the following documents:

- A Valid CR (Commercial Registration Certificate) for the applicant.
- An 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.
- An Approval Certificate for the thermal insulation product from Directorate of Civil Defense, except for cool roof paint, where it is not required.
- A Declaration of conformity letter has to be provided by the manufacturer for test reports dated more than 2 years from the requested date, as long as it does not exceed 5 years ago. **However, if the test report dated with more than 5 years ago**, a new test report has to be provided.
- Product specifications/ catalogues.
- Test report from an independent testing laboratory for the thermal insulation material/ cool roof paint of the product. **Accreditation (as per ISO-17025) along with accreditation scope** are required from the laboratory in the scope of the test report. **The tolerance error (Uncertainty measurement)** of the test shall be mentioned in the test report. The test shall be conducted based on one of the following standards:

<b>Thermal Insulation Products</b>	<b>Cool Roof Paints</b>
<p>The test shall be conducted under the mean <b>temperature of 35°C &amp; 60% of RH</b> based on the following standards:</p> <ul style="list-style-type: none"><li>Method-1: Guarded Hot Plate (ISO 8302 / ASTM C177/ BS EN 12664/ BS EN 12667/ BS EN 12939).</li><li>Method 2: Heat Flow Meter (ISO 8301/ ASTM C518/ BS EN 12664/ BS EN 12667/ BS EN 12939).</li><li>Method 3: Guarded Hot Box Method (ISO 8990 / ASTM C1363).</li></ul>	<ul style="list-style-type: none"><li><b>Solar Reflectance Tests</b> shall be conducted based upon one of the following test methods:<ul style="list-style-type: none"><li>ANSI/CRRC S100.</li><li>ASTM E903 in conjunction with E891 analyzed using factors appropriate for an air mass value of 1.5.</li><li>ASTM E1918.</li><li>ASTM C1549, using an air mass value of 1.5</li><li>CRRC-1 Test Method #1, using an air mass value of 1.5:<ul style="list-style-type: none"><li>Tile Test Method</li><li>Tile Template Method</li><li>Wood Method</li></ul></li></ul></li><li><b>Thermal Emittance Test</b> shall be conducted in accordance with ASTM C1371 or ANSI/CRRC S100. Three measurements shall be taken on each sample.</li></ul>

- The Registration certificate will be valid for two years period from the issue date;** unless the test report validity exceeds 5 years before it completes two years from registration issue date, where in this case, the validity date of the registration certificate will be the same as the test report validity date and cannot be extended for another two years after the test report date exceeded its validity.
- Electricity Conservation Section in the Electricity & Water Conservation Directorate (EWCD), shall study the submittals & evaluate the suitability of the product for thermal insulation in Bahrain, and issue a certificate of approval to the application if satisfactory.
- Electricity Conservation Section reserves the right in the future to request additional documents or withdraw its approval if violation found.

**The above documents should be sent to EWA by e-mail (ECS@ewa.bh). The local vendor should apply for registration.**