



**Specific Rules For Certification of Reflective Insulation  
(As per AS/NZS 4859.1:2002) Through Factory Assessment  
Dubai Central Laboratory- Inspection And Certification Section**

**Doc. Ref :RD-DP21-2142 (IC)**  
**Issue Date :07-01-2010**

**Rev. No.: 3**  
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Issue Date	Rev. No.	Summary Of Amendments
14-01-2007	0	First draft for comments
10-06-2007	0	Final draft
20-06-2007	1	Issue for use
15-07-2009	2	Document reference number and format is changed according to the new IMS, statement for the independent testing plan was changed, and the statement for surveillance was referred to the appropriate procedure, RD-DP21-2096 (IC).
07-01-2010	3	Additional test method for the Fire safety properties.

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**1. INTRODUCTION**

- 1.1 This document prescribes the specific rules for the implementation of the DM Third Party Product Certification System through factory assessment as applied to the specific product(s) identified herein, taking into consideration the applicable normative references and standard specifications.
- 1.2 The applicant shall comply with these specific rules, **and** to those already mentioned in the “General Rules for DM Third Party Product Certification System Through Factory Assessment “{RD-DP21-2001 (IC)}.

**2. SCOPE**

This specific rules applies only to thermal insulation as per material classification specified in clause (e) Section 2.3.2 of AS/NZS 4859.1 2002 standard.

**3. PRODUCT IDENTIFICATION AND APPLICABLE STANDARD/NORMATIVE REFERENCE**

- 3.1 Product name: Reflective Insulation
- 3.2 Applicable standard/Normative reference: AS/NZS 4859.1:2002  
Materials for the thermal insulation of buildings.  
Part 1: General criteria and technical provisions.
- 3.3 Additional references:
- 3.3.1 ISO 9001:2008 - Quality Management System – Requirements
- 3.3.2 ISO 19011:2002 - Guidelines for Quality and Environmental Management System Auditing

**4. DEFINITION OF TERMS**

The definitions given in AS/NZS 4859.1:2002, RD-DP21-2001 (IC) and in addition, shall apply:

- 4.1 Independent Testing Laboratory - Dubai Central Laboratory (DCL) or any testing laboratory recognized by the DM Certification Body.
- 4.2 Independent Test – test performed or conducted by an Independent Testing Laboratory
- 4.3 Standard Specification (SS) – AS/NZS 4859.1:2002, Materials for the thermal insulation of buildings.  
Part 1: General criteria and technical provisions.
- 4.4 Product Quality Assurance Plan – a document agreed upon both by the licensee and the certification body that is being used to ensure continuous compliance of the certified product.
- 4.5 QMS – Quality Management System aligned with the requirements of ISO 9001:2008 Standard

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**5. APPLICATION**

- 5.1 Manufacturer/producer of reflective insulation shall apply to Dubai Central Laboratory Department through Inspection and Certification Section for the license to use the DCL Conformity Mark.
- 5.2 Application forms shall be filled-up and submitted by the applicant-company together with the following documents
- 5.2.1 Trade License
  - 5.2.2 Complete Product Description and Specifications
  - 5.2.3 Brief Description of Manufacturing Process
  - 5.2.4 Copy of the Quality Manual (Controlled Copy)
  - 5.2.5 Vicinity Map and Factory Layout
  - 5.2.6 Valid Certification to ISO 9001 (if available)
  - 5.2.7 List of key personnel and their designation

5.3 Separate application shall be submitted for each product type or group of products that refers to a different specific rules.

**6. REQUIREMENTS FOR INITIAL FACTORY ASSESSMENT**

- 6.1 DCL duly authorized representative shall visit the applicant's factory/plant with the aim of ascertaining that the factory's quality management system is in accordance with the requirements of ISO 9001: 2008
- 6.2 An independent certification to ISO 9001 issued by a QMS certification body recognized by DM shall be considered as having satisfied this requirement; however, the DM Certification Body will still carry out verification audit to confirm that the factory is in compliance with the QMS requirements.
- 6.3 Verification audit shall be conducted by designated audit team based on ISO 19011:2002 – Guidelines for Quality and Environment Management System Auditing.
- 6.4 Minimum Required Test Equipments

The manufacturer of reflective insulation produced as per standard specification shall have the following minimum test equipment to check product compliance with the requirements of standard specification.

- 6.4.1 Heat Flow Meter
- 6.4.2 Infrared Tester
- 6.4.3 Equipment for fire testing

**7. REQUIREMENTS FOR INITIAL TESTING OF THE PRODUCT**

- 7.1 The manufacturer/applicant shall submit to Dubai Central Laboratory the declared value for the following
- 7.1.1 Thermal Resistance and Thermal Conductivity
  - 7.1.2 Infra-red Emittance
  - 7.1.3 Fire Safety Properties
- 7.2 Sampling

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- 7.2.1 Three sets of sample per product per type shall be subjected to testing; the first set, if applicable, will be tested in the plant witnessed by a duly authorized DCL representative, the second set will be sent to Independent Testing Laboratory. The third set will be kept by the manufacturer as reference for future use. Independent test shall only be conducted if the results of the in-plant test show satisfactory results
- 7.2.2 Test sample(s) for independent test shall be signed in the presence of DCL representative and shall be submitted to an Independent Testing Laboratory by the DCL representative.

**7.3 Product Requirements**

- 7.3.1 The product shall conform to the following requirements as prescribed in section 2 and section 9.3 of the standard specification (SS).
- 7.3.1.1 Thermal Resistance  
The thermal resistance shall be determined in accordance with the test method prescribed in Table 2.1 of the standard specification (SS).
- 7.3.1.2 Infra-red Emittance  
All reflective surfaces shall be tested for infra-red emittance in accordance with ASTM E 408.
- 7.3.1.3 Solar Reflectance  
Classification and measurement of solar reflectance shall be in accordance with section 2.5 of the standard specification (SS).
- 7.3.1.4 Corrosiveness  
The corrosiveness of the insulating materials shall be tested in accordance with Appendix H of the standard specification (SS).
- 7.3.1.5 Dry Delamination  
Dry delamination of the product shall comply with the requirements of AS/NZS 4201.1 as prescribed in section 9.3.2 of the standard specification (SS).
- 7.3.1.6 Surface Corrosion and Wet Delamination  
Surface corrosion and wet delamination of the product shall comply with section 9.3.3 when tested in accordance with Appendix I of the standard specification (SS).
- 7.3.1.7 Tests for Fire Safety Properties  
All reflective insulation when tested in accordance with ASTM E 84 (Surface Burning Characteristics) or with BS 476 Parts 6 (Fire propagation) & Part 7 (Surface spread of flame) should comply with the manufacturer's declared values.

7.4 Independent test shall only be conducted if the result of the in-plant test shows satisfactory results.

7.5 If the result of the test conducted by the independent testing laboratory shows non-conformance to the specified requirements, the provision for rejection specified in the standard shall apply. The retest shall be carried out on the reference sample kept by the manufacturer or on new samples collected by DM Certification Body, on which full testing shall be carried out ,if necessary.

7.6 If the retest passed, the initial product assessment is considered conforming to product specification. If not,

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the manufacturer will be advised to take corrective action.

7.7 Only after reassessment and subsequent product compliance shall the manufacturer be allowed to use the DCL Conformity Mark.

7.8 Packaging and Labeling Requirements

Each pack of reflective insulation shall comply with the labeling requirement of Table 3.1 as well as the labeling and packaging requirements prescribed in sections 9.4 and 9.5 of the standard specification (SS).

## **8. COMPLIANCE AND RESPONSIBILITIES OF THE LICENSEE**

### **8.1 Compliance**

8.1.1 When the results of the factory and product assessments show conformity to the requirements specified in the General Rules and Specific Rules, the license to use the DCL Mark shall be issued to the manufacturer for the type(s)/model(s)/brand(s) of the product tested.

8.1.2 The factory shall agree with the DM Certification Body for the preparation and implementation of a product quality assurance plan to ensure continuing compliance with the standard specification and the requirements of this certification scheme. The plan shall consist of (1) an internal product quality assurance, and (2) an independent testing plan

#### **8.1.2.1 Internal product quality assurance plan**

The factory shall prepare and submit to DM Certification Body for approval of an internal product quality assurance plan giving details of the tests to be carried out at the factory. This will include as a minimum, the following details: (1) location of sampling; (2) frequency of sampling; (3) quantities of samples; (4) tests to be carried out; (5) results acceptance criteria; and (6) responsible person to carry out the activity

The plan shall take into consideration the production process, the volume of production, the criticality of the test to be specified, and other relevant factors

#### **8.1.2.2 Independent testing plan**

The factory shall agree to an independent testing plan to be carried out on samples which are collected in accordance with RD-DP21-2096 (IC) – Surveillance of Licensed Establishments under the Factory Assessment Scheme, and implemented by the DM Certification Body.

### **8.2 Responsibilities of the Licensee**

8.2.1 The licensee shall ensure that his product, for which a license has been issued, conforms at all times to the requirements of the General Rules and Specific Rules and shall maintain to the satisfaction of DCL, a system of quality control including inspection and testing.

8.2.2 The licensee shall give the duly authorized representative(s) of DCL, access during working hours, without prior notification, to the premises of the factory where certified product is manufactured, for the purpose of evaluating the materials, production processes, finished products, quality assurance facilities, records and others in accordance with the requirements of the scheme.

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- 8.2.3 The licensee shall inform the DM Certification Body in writing of any change of management, transfer of plant site, modification in the product, manufacturing process or factory's quality management system.
- 8.2.4 Upon transfer of plant site, the license shall be deemed valid only after factory and product audit at the new site has been satisfactorily completed.
- 8.2.5 Any infraction stated in the licensing agreement for the use of DCL Conformity Mark shall constitute sufficient grounds for suspension, withdrawal and cancellation of the license against a licensee.
- 8.2.6 Any dispute that may arise in connection with the licensing agreement shall be settled in accordance with the General Rule for DM Third Party Product Certification System through Factory Assessment.

## 9. SURVEILLANCE

DM Certification Body shall carry out periodic surveillance to ensure consistent compliance with the requirements of this certification scheme as per RD-DP21-2096 (IC) – Surveillance of Licensed Establishments under the Factory Assessment Scheme.

## 10. USE OF THE DCL CONFORMITY MARK

- 10.1 The design and use of the DCL Conformity Mark shall be in accordance with the Terms and Conditions for the Use of the DCL Mark of Conformity, RD-DP21-2098 (IC).
- 10.2 The licensee shall submit a product-marking proposal for approval by the DM Certification Body. The proposal shall include drawings and/or diagrams showing the location and size of the marking for each size of the product/product container.
- 10.3 The license to use the DCL Conformity Mark is non-transferable.

## 11. FEE SCHEDULE

- 11.1 The licensee shall pay the applicable fees and charges related to the granting of the license to use the DCL Mark based on the DCL Official Fee Structure, RD-DP21-2097 (IC).
- 11.2 The fees for this certification scheme shall include but not limited to the following
- 11.2.1 Application Fee
  - 11.2.2 Initial Assessment Fee
  - 11.2.3 Certification Fee
  - 11.2.4 Surveillance Fee
  - 11.2.5 Annual Renewal Fee
  - 11.2.6 Testing Fee
  - 11.2.7 Marking Fee

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