

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي DUBAI MUNICIPALITY
	Document Title:	Specific Rules for FA Certification of Reflective Insulation (as per AS/NZS 4859.1: 2018)	عنوان الوثيقة:	
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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.
10-03-2019	4	Updated format as per new DM template and new DM logo
06-09-2020	5	Revised to add the options for initial audit by the approved CAB and remotely by PCAS. Adding definition for authorized auditor. Update for the new standard edition, new numbering system and followed terminologies. Add provision for accepting valid test reports.
26-09-2021	6	Removal of the documents in clause 2.1.2, in addition to further amendment in the provision for accepting valid test reports (clause 2.4.4), in line with DM 30% reduction of requirements (both service and specialized). Modifications in the auditing part for the factories already certified against ISO 9001 to opt for auditing only the areas of production and monitoring stages of product realization, quality control and final product testing and evaluation.

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1. GENERAL

1.1 INTRODUCTION

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

1.2 SCOPE

- 1.2.1 This specific rules applies only to thermal insulation as per material classification specified in AS/NZS 4859.1: 2018 standard.
- 1.2.2 This specific rule does not cover compliance to the requirements of UAE Fire & Life Safety Code of Practice 2018.
- 1.2.3 For certification of Factory Made Polyurethane Rigid Foam Thermal Insulation compliance to the requirements of UAE Fire & Life Safe Code of Practice 2018, the Specific Rules DM-DCLD-RD-DP21-2210 (IC) shall apply.
- 1.2.4 For pipe and duct insulation the specific rules DM-DCLD- RD-DP21-2185 (IC) shall apply.

1.3 PRODUCT IDENTIFICATION AND APPLICABLE STANDARD/NORMATIVE REFERENCE

- 1.3.1 Product name: Reflective Insulation
- 1.3.2 Applicable standard/Normative reference: AS/NZS 4859.1:2018 - Materials for the thermal insulation of buildings. Part 1: General criteria and technical provisions.
- 1.3.3 Additional references:

13.3.1 ISO 9001 - Quality Management System –Requirements

1.3.3.2 ISO 19011 - Guidelines for Auditing Management System

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1.4. DEFINITION OF TERMS

The definitions given in AS/NZS 4859.1: 2018, DM-RD-DP21-2001 (IC), the following shall also apply:

- 1.4.1 Independent Testing Laboratory - Dubai Central Laboratory (DCL) or any testing laboratory recognized by DCLD-PCAS.
- 1.4.2 Independent Test – test performed or conducted by the recognized Independent Testing Laboratory.
- 1.4.3 Standard Specification (SS) – AS/NZS 4859.1: 2018, Materials for the thermal insulation of buildings. Part 1: General criteria and technical provisions.
- 1.4.4 QMS - Quality Management System aligned with the requirements of ISO 9001 Standard.
- 1.4.5 Client : Manufacturer of Reflective Insulation
- 1.4.6 DM Certification Body – Products Conformity Assessment Section- Dubai Central Laboratory (DCLD-PCAS)
- 1.4.7 Authorized auditor : is any approved auditor by DCLD-PCAS either internal within DCLD or external (Approved CAB's auditor or approved auditor based on a signed contract)

2. REQUIREMENTS FOR CERTIFICATION

2.1. APPLICATION

- 2.1.1 The client shall apply to DCLD-PCAS for the certification and authorization to use of DCL Conformity Mark.
- 2.1.2 Application form shall be submitted by client to DCLD-PCAS
- 2.1.3 Separate application shall be submitted for each product type or group of products that refers to a different specifications /specific rules.

2.2. FACTORY OPERATION

- 2.2.1 Quality Management System

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The client shall have a Quality Management System that is aligned to the requirements of ISO 9001 standard.
NOTE: Having a certificate of ISO 9001 is not a mandatory requirement; however the structure of the manufacturer's QMS shall be in line with its requirements.

2.2.2 Laboratory

The client shall have a quality assurance laboratory to carry out factory production control testing to ensure that the reflective insulation comply with the requirements of the standard specification.

The laboratory can be part of the factory facilities, or, can be through a documented agreement with an accredited external laboratory. As a minimum requirement, the laboratory shall have the following testing equipment:

- Heat Flow Meter
- Infrared Tester
- Weighing Scale
- Dimensional measuring instruments

2.3 INITIAL FACTORY AUDIT

2.3.1 Initial factory audit will be carried out by duly authorized auditor(s) which will cover auditing of the quality management system to verify its compliance with the requirements of ISO 9001, in addition to verify the implementation of DCLD-PCAS certification's requirements. Where possible; the audit can be carried out remotely as per (DM-DCLD-RD-DP21-2098 (IC) Guidelines for Remote Audit) or as per the related approved guidelines which are followed by the approved outsourced CAB.

NOTE: An independent certification to ISO 9001 issued by a QMS certification body recognized by DCLD-PCAS may be considered as having satisfied this requirement; however, DCLD-PCAS may still opt to carry out verification audit to confirm that the factory is in compliance with requirements of DCLD certification schemes and rules, mainly the areas of production and monitoring stages of product realization, quality control and final product testing and evaluation.

2.3.2 Factory audit shall be conducted by designated audit team in accordance with ISO 19011 – Guidelines for Auditing Management Systems.

2.4 PRODUCT EVALUATION

2.4.1 Sampling

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- 2.4.1.1 Sampling for initial testing shall be taken randomly by the authorized auditor from the products to be certified (sizes and quantities to be determined) either from production lines or the factory warehouse, in accordance with the requirements of the standard specification.
- 2.4.1.2 Three sets of sample per product per type shall be subjected to testing; the first set, where possible, will be tested in the plant witnessed by a duly authorized auditor, the second set will be sent to DCLD-PCAS approved Independent Testing Laboratory. The third set will be kept by the client as reference for future use.
- Sample(s) for independent test shall be packed/sealed and signed in the presence of the authorized auditor and shall be submitted to DCLD-PCAS approved lab.
- 2.4.2 Product Evaluation and Testing
- 2.4.2.1 The manufacturer/applicant shall submit to DCLD-PCAS declaration of product specification subject for certification. This shall include but not limited to:
- Thermal Resistance and Thermal Conductivity
 - Infra-red Emittance
- 2.4.2.2 Samples drawn for independent test shall meet the requirements of the Standard Specification (SS) as follows:
- 2.4.2.2.1 Thermal Resistance - The thermal resistance shall be determined in accordance with the test method prescribed in Table 2.1 of the standard specification (SS).
- Note1: Temperature condition to be used in carrying out this test will be as per Dubai requirement, that is @ 35°C and 60% Relative Humidity and the reference mean temperature is 35 °C*
- 2.4.2.2.2 Infra-red Emittance - All reflective surfaces shall be tested for infra-red emittance in accordance with ASTM E 408.
- 2.4.2.2.3 Solar Reflectance - Classification and measurement of solar reflectance shall be in accordance with section 2.5 of the standard specification (SS).
- 2.4.2.2.4 Corrosiveness - The corrosiveness of the insulating materials shall be tested in accordance with Appendix H of the standard specification (SS).
- 2.4.2.2.5 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).

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2.4.2.2.6 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).

2.4.3 The results of testing must meet the requirements as per the standard specification.

2.4.4 Where applicable, Independent test shall only be conducted if the result of the in-plant test shows satisfactory results. DCLD-PCAS shall opt to accept available valid test reports conducted by an approved DCLD-PCAS independent laboratory within one year from the date of the initial assessment, in line with the internal quality control testing plan of the factory. In such case, the testing of that particular parameter(s) shall be waived accordingly.

2.4.5 If the result of the test conducted by the DCLD-PCAS approved 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 client or on new samples collected by the authorized auditor on which full testing shall be carried out, if necessary.

2.4.6 If the re-test passed, the initial product assessment is considered conforming to product specification. If not, the client will be advised to take corrective action.

2.4.7 Only after reassessment and subsequent product compliance shall the client be allowed to use DCL Conformity Mark on his product(s) that have been tested and found complying with the certification requirements.

3. GRANTING OF THE DCL CERTIFICATION

3.1 CONDITIONS FOR GRANTING THE DCL PRODUCT CONFORMITY CERTIFICATE

3.1.1 When the results of the factory audit (clause 2.3) and product evaluation (clause 2.4) show conformity to the requirements specified in the general rule and specific rule, the Certificate of Conformity and authorization to use the DCL Conformity Mark shall be issued to the client for the type(s)/model(s)/brand(s) of the product covered by the assessment.

3.1.2 The client shall agree with DCLD-PCAS for the preparation and implementation of a product quality assurance plan /mechanism to ensure continuing compliance with the Standard Specifications and the requirements of this certification scheme. It shall consist of (1) an internal product quality assurance plan, and (2) an independent testing plan.

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3.1.3 Factory Production Control System (Internal Product Quality Assurance Plan)

The client shall have a factory production control system (internal product quality assurance plan). 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. The plan shall 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 cover all inspections carried out thru out the whole manufacturing process; i.e. (raw materials – production lines- finished product testing and evaluation as per standard specifications – final packing.

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.

3.1.4 Independent Testing Plan

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

3.2 ISSUANCE OF DCL PRODUCT CONFORMITY CERTIFICATE

If the conditions mentioned in clause 3.1 above have been complied, the client shall be issued a DCL Certificate of Conformity and a Scope of Certification that covers the type(s) and size(s) of the products that are certified and will be authorized to use the DCL Conformity Mark on the certified products.

3.3 RESPONSIBILITIES OF THE CERTIFIED CLIENT

3.3.1 The client shall ensure that his product, for which a certificate of conformity has been issued, conforms at all times to the requirements of the General Rule and Specific Rules, and regulations and legislation, whenever applicable, and shall maintain to the satisfaction of DCLD-PCAS, a system of quality control including inspection and testing.

3.3.2 The client shall give the duly authorized auditor(s) by DCLD-PCAS, 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.

3.3.3 The client shall inform DCLD-PCAS in writing of any change of management, transfer of plant site, modification in the product, manufacturing process or factory's quality management system.

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- 3.3.4 Upon transfer of plant site, the certificate of conformity shall be deemed valid only after factory and product audit at the new site has been satisfactorily completed.
- 3.3.5 Any infraction stated in the terms and conditions of the certification scheme and the use of DCL Conformity Mark shall constitute sufficient grounds for suspension, withdrawal and termination of certification in accordance with DM-DCLD-IMS-RD-07.
- 3.3.6 Any dispute that may arise in connection with the Terms and Conditions of the certification scheme shall be settled in accordance with DM-DCLD-IMS-RD-08 Appeals, Disputes, and Complaints Procedure.
- 3.3.7 The client shall pay all applicable fees related to the certification process.
- 3.4 USE OF THE DCL CONFORMITY MARK
- 3.4.1 The design and use of the DCL Conformity Mark shall be in accordance with the Terms and Conditions for the Use of the DCL Conformity Mark, DM-DCLD-IMS-RD-13.
- 3.4.2 The client shall submit a product-marking proposal for approval by the DCLD-PCAS. The proposal shall include drawings and/or diagrams showing the location and size of the marking for each size of the product.
- 3.4.3 The Certificate of Conformity and the authorization to use the DCL Conformity Mark is non-transferable.

4. SURVEILLANCE

- 4.1 DCLD-PCAS or their approved CAB shall carry out periodic surveillance to ensure consistent compliance with the requirements of this certification scheme as per DM-DCLD-RD-DP21-2096 (IC) – Surveillance of Certified Clients under the Factory Assessment Scheme.
- 4.2 Testing as part of the surveillance shall be in accordance with the Independent Testing Plan (clause 3.1.4) that has been agreed between DCLD-PCAS - and the client.

5. FEE SCHEDULE

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5.1 The client shall pay the applicable fees and charges related to the granting of the certificate of conformity and the authorization to use the DCL Conformity Mark based on the DCL Official Fee Structure, DM-DCLD RD-DP21-2097 (IC).

5.2 The fees for this certification scheme shall include but not limited to the following

- 5.2.1 Application Fee
- 5.2.2 Initial Assessment Fee
- 5.2.3 Certification Fee
- 5.2.4 Marking Fee
- 5.2.5 Surveillance Fee
- 5.2.6 Annual Renewal Fee
- 5.2.7 Testing Fee
- 5.2.8 Outsource Activity Fee , where applicable

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