

 حكومة دبي GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title:	Certification of Pipe and Duct Insulation & Acoustic Insulation as per Al Sa'fat – Dubai Green Building System	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-CQP-2185	رقم الوثيقة:	

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Issue Date	Rev. No.	Summary Of Amendments
24/02/2015	0	First draft for comments
26/02/2015	0	Final draft circulated to client
05/03/2015	1	Issue for use
05/07/2017	2	Amendment to align the fire test requirement with the UAE Fire and Life Safety Code of Practice 2016. Revised Format according to the latest template
03/08/2017	3	Added Annex A – Pages extracted from UAE Fire and Life Safety Code of Practice
30/05/2018	4	Updated to align with Al Sa'fat – Dubai Green Building Evaluation System; removed Thickness test and added Density test requirement; Format updated in accordance with DM unified template
13/11/2018	5	Reviewed as per the fire test requirements with the UAE Fire and Life Safety Code of Practice 2018 and found to be still the same.
21/03/2019	6	Revision of Scope to reflect that the DCL Certification of pipe and duct insulation material does not cover compliance to the requirements of UAE Fire & Life Safety Code of Practice 2018.
04/08/2020	7	Add the options for initial audit by the approved CAB and remotely by CQPS. Adding definition for authorized auditor. Update for the new numbering system and followed terminologies. Add provision for accepting valid test reports
25/04/2021	8	Revised to add provision of internal testing of VOC and formaldehyde of pipe and duct insulation materials.
26/09/2021	9	Revised to reflect the 2020 version of Al Sa'fat – Dubai Green Building Evaluation System. Removal of the documents in clause 2.1.2, in addition to further amendment in the provision for accepting valid test reports (clause 2.4.1.4), 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.
04/10/2022	10	Changing section name as per the new organizational structure and replace HOU by CQPSM (Section's Manager). Adding surveillance in 2.4.1.4
27/03/2023	11	Full re-structuring and transfer of common provisions to the general rule. Clauses are re-numbered and document title has been revised accordingly. Table 1 - clause 5.02.11 in Sa'fat (for minimum insulation thickness for pipes passing through unconditioned spaces) is deleted and not applicable anymore (replaced by a reference to BS 5422 and ASHRAE 90.1). Adding reference to section 701.01. Use of New DM Logo
13/08/2024	12	Changing the logo of the Government of Dubai with the latest design. The revision includes the Acoustic Insulation in the Scope of DCL Certification.
17-09-2024	13	Revised to reflect provisions for the acceptance of test report under clause 5.4.2 & 5.4.3.
19-06-2025	14	Restructured to align with the new internal formatting of all documents
21/07/2025	15	Revised to reflect the requirements of Formaldehyde & VOC in clause 5.5 for pipe and duct insulation materials, and to reflect the certification requirements for acoustic insulation as specified in clause 5.4
18-09-2026	16	Changes in the document numbering format (CQPS & DP21 to CQP).

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1. INTRODUCTION

- 1.1 This document prescribes the specific rule for certification of the product(s) as identified herein, in accordance with the requirements of DM Third Party Product Certification Scheme Through Factory Assessment, taking into consideration the applicable normative references and standard specification, in addition to the requirements for conformity evaluation, as stated below.
- 1.2 The applicant/client shall comply with this specific rule, and to all provisions under the **“General Rule for DM Third Party Product Certification Scheme Through Factory Assessment “DM-DCLD-RD-DP21-2001 (IC).**
- 1.3 This specific rule **is an integral part of the general rule**, and both shall always be read together.

2. SCOPE

- 2.1 This specific rule applies to pipe and duct insulation, and acoustic insulation in accordance with the related requirements and specifications in Clauses [502.11] and [701.01] in the 2023 Al Sa'fat Dubai Green Building System-2nd edition and Clauses K10.1.5.4, H.4.8.4 in Dubai Building Code.
- 2.2 This specific rule does not -by itself- permit the use of the below product in the construction sites. However, it does provide the necessary general conformity assessment criteria, which are required for the evaluation and issuance of the certification and the authorization of the use of the DCLD Conformity Mark. Other relevant requirements issued by the regulatory bodies if any, shall always be fulfilled.

3 PRODUCT IDENTIFICATION AND APPLICABLE STANDARD/NORMATIVE REFERENCE

- 3.1 Product name: Pipe and Duct Insulation
Acoustic Insulation
- 3.2 Applicable standard/Normative reference: *2023 Al Sa'fat Dubai Green Building System-2nd edition* clauses [502.11] & [701.01]

Dubai Building Code clauses K10.1.5.4; K.10.2.11; H.4.8.4

2023 Al Sa'fat Dubai Green Building System-2nd edition - (Clauses (403.01, 403.02, 403.03, 701.01)

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Dubai Building Code - (H.4.5, H5.7, H10.4 and H.5.11, H10.3 – H.10.3.1 General/H.10.3.2 Building services noise/ H.10.3.3 Sound insulation
K.10.1.2, K10.2.7, K.10.2.11, K10.6, H.4.5

3.3 Additional reference:

ISO 9001 Quality Management System – Requirements
 ISO 19011 Guidelines for Auditing Management Systems
 BS 5422:2009 Thermal insulating materials for pipes, tanks, vessels, ductwork and equipment operating within the temperature range –40 °C to +700 °C – Method for specifying
 ASHRAE 90.1-2022 - Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings.
 Al Sa'fat - Section 701.01 (Thermal and Acoustical Insulation Materials)
 BS 8233: 2014 – Guidance on sound insulation and noise reduction for buildings

4 DEFINITION OF TERMS

4.1 In addition to the definitions given in Al Sa'fat Dubai Green Building System, Dubai Building Code and the General Rule of the scheme [DM-DCLD-RD-CQP-2001], the following shall apply:-

4.1.1 Standard Specification – *2023 Al Sa'fat Dubai Green Building System-2nd edition* clauses [502.11] & [701.01]

Dubai Building Code clauses K10.1.5.4; K.10.2.11

2023 Al Sa'fat Dubai Green Building System-2nd edition - (Clauses (403.01, 403.02, 403.03, 701.01)

Dubai Building Code - (H.4.5, H5.7, H10.4 and H.5.11, H10.3 –H.10.3.1 General/H.10.3.2 Building services noise/ H.10.3.3 Sound insulation
K.10.1.2, K10.2.7, K.10.2.11, K10.6, H.4.5

5 REQUIREMENTS FOR INITIAL CERTIFICATION

5.1 The process of application, initial assessment and product sampling shall be in line with the related provisions in the general rule and the standard specifications.

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5.2 The manufacturer shall have a quality assurance laboratory to carry out factory production control testing. As a minimum requirement, the laboratory shall have the following testing equipment:

- a. Weighing Scale
- b. Dimensional measuring instruments.

5.3 Product Evaluation and Testing (*Pipe and Duct Insulation Materials*)

5.3.1 Thermal Conductivity (Flat Material) shall be tested as per ASTM C 518 – The manufacturer shall submit a formal declaration of the thermal conductivity (35°C & 60% ± 5 % RH) of the product. The test result shall be evaluated in accordance with the declared value.

5.3.2 Water Vapor Permeance shall be tested as per ASTM E 96 or BS 3177 – The result shall meet the requirements as per Table 1 of BS 5422:2009.

Note: As per clause 6.2.3 of BS 5422: 2009 this requirement shall be applicable for refrigeration and air conditioning applications only.

5.3.3 Density shall be tested as per BS EN 1602 (for flat insulation materials) or ASTM C302 (for pipe insulation materials). Alternatively, Dimensions and Density shall be tested as per ASTM C303 - The manufacturer shall submit a formal declaration of the dimension and density, including tolerance of the product. The test result shall be evaluated in accordance with the declared values.

5.4 Product Evaluation and Testing (*Acoustic Insulation Materials*)

5.4.1 Company Declaration

5.4.1.1 The manufacturer shall submit to DCLD-CQPS a declaration of product specification subject for certification. This shall include but not limited to:

- Type of Material
- Dimensions & Density
- Application of the material to be used as acoustic / sound insulation
- Acoustic Insulation Properties [Noise Reduction Coefficient (NRC), Impact Insulation Class (IIC), Sound Absorption Coefficient (SAC), Sound Insulation and Noise Reduction for buildings, and other acoustic insulation properties]

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5.4.2 Density shall be tested as per BS EN 1602. Alternatively, Dimensions and Density shall be tested as per ASTM C303.

5.4.3 Acoustic properties shall be tested for each thickness, as per the manufacturer's declaration of acoustic insulation properties.

- Noise Reduction Coefficient (NRC) - ASTM C423, ISO 354, or other applicable test standards
- Impact Insulation Class (IIC) - ASTM E989, or other applicable test standards
- Sound Absorption Coefficient (SAC) - ASTM C423, ISO 10534-2; or other applicable test standards
- Sound Insulation and Noise reduction for buildings as per BS 8233
- Acoustic properties as declared by the manufacturer, not mentioned above shall be tested as per the relevant applicable test standards

5.4.4 During the initial evaluation or initial audit, tests reports submitted by the client / applicant may be accepted provided that the report (for acoustic properties only) is issued from an accredited laboratory whose scope covers the test method for acoustic test and the issued date of the test reports shall not be more than five (5) years from the time of audit.

5.4.5 During renewal of certificate, DCLD-CQPS may waive testing and accept test reports (for acoustic properties only) which are issued by an accredited testing laboratory covering the acoustic products in their scope of accreditation and within five (5) years from the date of renewal.

5.5 The manufacturer shall have a system to verify the Formaldehyde Content and/or Volatile Organic Compound (VOC), as applicable to the product, either in the raw materials used, or in the final product.

6 GRANTING OF THE DCLD CERTIFICATION

6.1 The DCLD product conformity certificate and the authorization to use the DCLD conformity mark shall be granted upon conformance with all related provisions in the general rule.

6.2 Use of the DCL Conformity Mark shall be as per DM-DCLD-RD-CQP-2069.

6.3 Fees shall be as per DM-DCLD-RD-CQP-2097 and other relevant provisions in the general rule.

6.4 DCLD-CQPS shall carry out surveillance of certified clients based on the approved periodic plans and related provisions in the general rule.

6.5 Appeals, disputes, and complaints shall be in line with the relevant provisions in the General Rule.

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