

 GOVERNMENT OF DUBAI	<b>Organization/Unit:</b> إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي DUBAI MUNICIPALITY
	<b>Document Title:</b> Specific Rules for Type 1 Certification of SRI of Roofing Surfaces as per 2020 Al Sa'fat Dubai Green Building System	عنوان الوثيقة:	
	<b>Doc Ref.</b> DM-DCLD-RD-DP32-5111 (IC)	رقم الوثيقة :	

Issue Date	Rev. No.	Summary Of Amendments
27-09-2012	0	First draft for comments
10-10-2012	0	Final draft for comments
14-10-2012	1	Issue for use
04-05-2016	2	Aligning with the requirements of ISO 17067 and allowing Type 1a
25-12-2017	3	Amended to change the validity of the certificate
02-07-2018	4	Updated the requirements from GBRS to Al Sa'fat; updated the format as per DM unified template.
11-04-2019	5	Updated format as per new DM logo
12-05-2022	6	Revised to reflect the 2020 version of Al Sa'fat – Dubai Green Building System. Updated the certification validity. Format updated with Dubai font. Other updates as highlighted. Alignment with the latest numbering and terminology system in DCLD.

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## 1. GENERAL

This document is a Specific Rule for a Type 1 certification of the product covered by the Standard Specification/Regulation defined herewith. The Type 1 certification system is in accordance with ISO/IEC 17067 and described in DM-DCLD-RD-DP32-5001 (IC) General rules for Type 1 product certification scheme.

1.1 Type 1a certification shall be issued based on compliance of the sample tested and does not represent any particular quantity, population, or production. DCLD certification body implements Type 1a certification scheme for specific Dubai construction project. Under this scheme, the certification can be issued based on sample brought in by the Project Consultant.

1.2 Type 1b certification shall be issued based on compliance of samples selected by DCLD representative in accordance with the sampling plan. The certification covers the specific quantity (or population) of the product defined in the application and represented by the samples subjected to testing.

## 2. CERTIFICATION REQUIREMENTS

### 2.1 Applicable Regulation (REG)

Regulation No.	Not Applicable
Title of Regulation (REG)	2020 Al Sa'fat Dubai Green Building System
Applicable Clause	304.01 Urban Heat Island Effect – Roof Solar Reflective Index of Opaque External Roofing Surfaces

2.2 Test(s) to be carried out on each sample (The test shall be carried out at an independent laboratory, preferably at Dubai Central Laboratory Department DCLD):

S/N	Properties to be Determined	Test Method	Requirements as per REG For Classification Only (See Annex A)	
1	Solar Reflective Index	ASTM E1980-01	Steep Sloped Roofs (Slope steeper than 1:6)	≥ 29
			Flat and Low Sloped Roofs	≥ 78

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### 2.3 Sampling under Type 1a

- 2.3.1 Under Type 1a scheme, the sample(s) to be tested shall be submitted to DCLD or their approved laboratory by the Project Consultant or his designated representative.
- 2.3.2 The quantity of sample to be submitted shall be in accordance with the requirements of the applicable test method(s) and in accordance with DCLD guidance for Type 1a sampling.

### 2.4 Sampling under Type 1b

- 2.4.1 The population of the product (batch) shall be defined prior to sampling. The members of the batch shall be of uniform physical description (i.e. same size shape, dimensions, etc.) and shall be distinctly identified by any appropriate means (For example: by batch number, quantity, location, heat number, markings, dimensions, etc. or a combination of them).
- 2.4.2 Based on the defined batch and the tests to be carried out as per clause [2.2], the DCLD Certification Body shall prepare a "Sampling and testing plan" that will give details of the number of samples and the tests to be carried out on each selected sample. The applicant for certification shall agree to the sampling and testing plan.
- 2.4.3 The sampling and testing plan shall take guidance from DM-DCLD-RD-DP32-5003 (IC) "Guidance for preparing sampling and testing plan"; and shall be prepared in such manner that will provide highest confidence that the sample represents the entire population of product being certified.
- 2.4.4 In case the sample fails to meet the requirements, the applicant may request for re-sampling and re-testing from the same batch of product/s, in accordance with the agreed sampling plan. If the new sample again fails to meet the requirements, the product shall be considered non-conforming and no certificate shall be issued.

## 3. ISSUANCE OF TYPE 1 CERTIFICATE

### 3.1 Type 1a Certificate of Conformity

- 3.1.1 The Type 1a certificate shall be issued only when results are meeting the applicable requirements as mentioned in clause [2.2].
- 3.1.2 The certificate is applicable only to the product that was subjected to testing. It does not represent any quantity, batch or lot or any subsequent production.
- 3.1.3 The certificate shall be applicable only to a particular project and shall identify the project details such as Project Name, Project Number, Project Consultant, Project Contractor, etc.

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### 3.2 Type 1b Certificate of Conformity

- 3.2.1 The Type 1b certificate shall be issued only when results are meeting the applicable requirements as mentioned in clause [2.2].
- 3.2.2 The certificate is applicable only to the quantity of product defined and identified as per clause [2.4.1]. It does not apply to the entire production of the factory.
- 3.2.3 The Type 1b certificate is valid for One year only.
- 3.3 The Type 1b certificate shall be issued upon payment of fees in accordance with DM-DCLD-RD-DP32-5002 (IC).

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## Annex A

Results of SRI Test for Roofing Surface shall be used for classification as:

SRI Class 1 ( $\geq 78$ ) – “Can be Used in 75 - 100% of surface to be coated – Sloped or Flat Roof”

SRI Class 2 ( $29 < 78$ ) - “Can be Used in 75 - 100% of surface to be coated – Sloped Roof”

SRI Class 3 ( $< 29$ ) – “Can be Used in 0 – 25% of surface to be coated – Sloped or Flat Roof”

### 304.01 Urban Heat Island Effect

For all new buildings, all opaque external roofing surfaces must comply with a minimum Solar Reflectance Index (SRI) value according to Table 304.01 (1), for a minimum of 75% of the roof area:

Table (1) 304.01 - Roof SRI Requirements

Type of Roof	Minimum Roof SRI
Steep Sloped Roofs (slopes steeper than 1:6)	29
Flat and Low Sloped Roofs	78

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