

 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>	Certification of Coal Fly Ash and Raw Calcined Natural Pozzolan for Use in Concrete as per ASTM C618-17a	عنوان الوثيقة:	
	<b>Doc Ref.</b>	DM-DCLD-RD-DP21-2137 (IC)	رقم الوثيقة :	

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Issue Date	Rev. No.	Summary Of Amendments
13-12-2006	0	First draft for comments
11-01-2007	1	Issue for use.
15-08-2009	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 shortened by referring the appropriate procedure, RD-DP21-2096 (IC).
11/07/2010	3	Review with the requirements of the current version of the standard (08a) and found to be still suitable.
26/02/2018	4	Update the specific rule according to latest and updated standard (ASTM C 618-17a)
25/03/2019	5	Updated format as per DM logo
27/08/2020	6	Add the options for initial audit by the approved CAB and remotely by PCAS. Adding definition for authorized auditor. Update for the new numbering system and followed terminologies. Add provision for accepting valid test reports. Inclusion of more detailed provisions for independent testing plan and Internal Product Quality Assurance Plan. Adding provision for re-test.
26/09/2021	7	Removal of the documents in clause 2.1.2, in addition to further amendment in the provision for accepting valid test reports (clause 2.4.2.5), 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.
07/10/2022	8	Changing section name as per the new organizational structure, and replace HOU by CQPSM (Section's Manager). Adding surveillance in 2.4.2.5
27/03/2023	9	Full re-structuring and transfer of common provisions to the general rule. Clauses are re-numbered and document title has been revised accordingly. Revision of clause 5.3. Use of New DM Logo

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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 specifies requirements for Coal Fly Ash and Raw or Calcined Natural Pozzolan which use in manufacturing of ready mix concrete.
- 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: Coal Fly ash and Calcined Natural Pozzolan
- 3.2 Applicable standard/Normative reference: ASTM C618 -17a for Coal Fly Ash and Raw or Calcined Natural Pozzolan — Definitions, specifications and conformity
- 3.3 Additional reference:
- ISO 9001 Quality Management System – Requirements
- ISO 19011 Guidelines for Auditing Management Systems
- BS EN 196-n Methods of testing cement

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#### 4 DEFINITION OF TERMS

4.1 In addition to the definitions given in ASTM C618 and the General Rule of the scheme [DM-DCLD-RD-DP21-2001 (IC)], the following shall apply:-

4.1.1 Standard Specification – ASTM C618 -17a for Coal Fly Ash and Raw or Calcined Natural Pozzolan — Definitions, specifications and conformity.

#### 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.

5.2 The factory shall have a laboratory with the following testing equipment as a minimum:

- Chemical Properties Analyzer
- Ventilated Electric Oven (capable of being controlled to 105 +/- 5 °C)
- Shallow Container (about 20 g capacity and can withstand 150 °C without loss in mass)
- Desiccators
- Sieve Frame (cylindrical with nominal dimensions of 50mm diameter and 75mm depth)
- Sieve Cloth (45 µm stainless steel mesh)
- Spray Nozzle
- Pressure Gauge (at least 160 kPa capacity with 5 kPa intervals)
- Weighing Scale (capable of weighing 100 g to the nearest 0.001 g)
- Compressive Strength Tester

5.3 Product Evaluation and testing

5.3.1 The Coal Fly Ash and Raw or Calcined Natural Pozzolan shall be classified according to clause 4.0 of the specification standard.

5.3.2 The Coal Fly Ash and Raw or Calcined Natural Pozzolan shall conform to chemical composition specified in clause 6.0 of the relevant standard as below detailed :

- Silicon Dioxide plus aluminum oxide plus iron oxide
- Sulfur Trioxide
- Moisture Content
- Loss on Ignition

5.3.3 The Fly ash and natural Pozzolan shall conform to the physical requirements prescribed in Table 2. For Supplementary optional physical requirements will be as per Table 3 of the standard. As below detailed

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5.3.3.1 Fineness

5.3.3.2 Strength activity index

5.3.3.3 Water requirement

5.3.3.4 Soundness (Autoclave Expansion or Contraction)

5.3.3.5 Uniformity Requirements ( Density and Percent retained on 45 µm)

5.3.4 The tests to be carried out shall cover the following required tests as mentioned in clause 6 and 7 of the Standard Specification.

5.3.5 The client shall have a factory production control system (internal product quality assurance plan. The plan shall be in accordance with below testing frequency:-

SN	REQUIREMENTS	FREQUENCY OF TEST
1	Silicon Oxide plus aluminum oxide plus iron oxide	1 per month
2	Sulfur Trioxide	1 per month
3	Moisture Content	1 per month
4	Loss on Ignition	2 per week
5	Fineness	2 per week
6	Strength activity index	2 per week
7	Density	1 per month
8	Water Requirement	2 per week
9	Soundness	1 per week
10	Percent retained on 45 µm	2 per week

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

## 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 Fees shall be as per DM-DCLD-RD-DP21-2074 (IC) and other relevant provisions in the general rule.

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

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

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