

 GOVERNMENT OF DUBAI	Organization/Unit: إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية: 	 بلدية دبي Dubai Municipality
	Document Title: Certification of Fly Ash for Concrete as per BS EN 450-1: 2012	عنوان الوثيقة: 	
	Doc Ref. DM-DCLD-RD-DP21-2125 (IC)	رقم الوثيقة : 	

Table of Contents

REVISION HISTORY	2
INTRODUCTION	3
SCOPE.....	3
PRODUCT IDENTIFICATION AND APPLICABLE STANDARD/NORMATIVE REFERENCE	3
DEFINITION OF TERMS	4
REQUIREMENTS FOR INITIAL CERTIFICATION	4
GRANTING OF THE DCL CERTIFICATION AND FEES	6

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 07/02/2023	Rev. No. : 08
General / عام : Level of Confidentiality / درجة السرية	Page 1 of 6

Note: Printed copy of this document shall be treated as 'Uncontrolled'. Always refer the controlled version 'Online

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title:	Certification of Fly Ash for Concrete as per BS EN 450-1: 2012	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2125 (IC)	رقم الوثيقة :	

Issue Date	Rev. No.	Summary Of Amendments
01-03-2006	0	First draft for comments
12-03-2006	0	Final draft
18-03-2006	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 shortened by referring to RD-DP21-2096 (IC).
25-03-2019	3	Updated format as per new DM template and new DM logo
11-05-2020	4	New amendment as per BS EN 450-1:2012 standard, changing font type and some editorial changes. Reformatting to align with the common and latest and structure of specific rules
27-08-2020	5	Add the options for initial audit by the approved CAB and remotely by PCAS. Adding definition for authorized auditor. Update for 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 2.4.2.4), 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.
07/10/2022	7	Changing section name as per the new organizational structure, and replace HOU by CQPSM (Section's Manager), also addition of surveillance in the clause 2.4.2.4
27/03/2023	8	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

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 08
General / عام : Level of Confidentiality / درجة السرية	Page 2 of 6

Note: Printed copy of this document shall be treated as 'Uncontrolled'. Always refer the controlled version 'Online

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title:	Certification of Fly Ash for Concrete as per BS EN 450-1: 2012	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2125 (IC)	رقم الوثيقة :	

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 the chemical and physical properties of siliceous fly ash for the production of concrete, including in particular cast-in-situ or prefabricated structural concrete, mortars and grouts.
- 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: Fly Ash for concrete
- 3.2 Applicable standard/Normative reference: BS EN 450-1:2012
Part 1. Definition, Specifications and conformity criteria of fly ash for concrete
- 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

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 08
General / عام : Level of Confidentiality / درجة السرية	Page 3 of 6

Note: Printed copy of this document shall be treated as 'Uncontrolled'. Always refer the controlled version 'Online

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title:	Certification of Fly Ash for Concrete as per BS EN 450-1: 2012	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2125 (IC)	رقم الوثيقة :	

4 DEFINITION OF TERMS

4.1 In addition to the definitions given in BS EN 450-1 and the General Rule of the scheme [DM-DCLD-RD-DP21-2001 (IC)], the following shall apply:-

4.1.1 Standard Specification – BS EN 450-1:2012

Part 1. Definition, Specifications and conformity criteria of fly ash for concrete

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 as required by BS EN 196-1:1995

5.3 Product Evaluation and testing

5.3.1 The product shall conform to the requirements as specified in clause 5 of the standard specification.

5.3.2 Sampling shall be in accordance with clause 8 and 9 of EN 196-7

5.3.3 The client shall have a factory production control system (internal product quality assurance plan. The plan shall be in accordance with Table 2 of the standard specification:-

- Loss on Ignition (LOI)
- Chloride
- Sulphate Content
- Free Calcium Oxide
- Reactive Calcium Oxide
- Reactive Silicon Dioxide
- Sum of SiO₂ + Al₂O₃ + Fe₂O₃

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 08
General / عام : Level of Confidentiality / درجة السرية	Page 4 of 6

Note: Printed copy of this document shall be treated as 'Uncontrolled'. Always refer the controlled version 'Online

 GOVERNMENT OF DUBAI	Organization/Unit: إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title: Certification of Fly Ash for Concrete as per BS EN 450-1: 2012	عنوان الوثيقة:	
	Doc Ref. DM-DCLD-RD-DP21-2125 (IC)	رقم الوثيقة :	

- h. Total Content of Alkalies
- i. Magnesium Oxide
- j. Soluble Phosphate
- k. Fineness
- l. Activity Index
- m. Soundness (if Declared)
- n. Particle Density
- o. Initial Setting Time
- p. Water Requirement
- Q. Release of Dangerous Substances and Emission of Radioactivity
- r. Total Phosphate.

5.3.4 The test to be carried out in accordance with the standard specification shall be as follows:

5.3.4.1 Chemical requirements

- a. Loss on Ignition as per EN 196-2.
- b. Chloride as per EN 196-2.
- c. Sulphate Content as per EN 196-2.
- d. Free calcium Oxide as per EN 451-1.
- e. Reactive calcium oxide as per EN 196-2.
- f. Reactive silicon dioxide as per EN 197-1.
- g. Sum of Silicon dioxide (SiO₂), Aluminum oxide (Al₂O₃) and Iron Oxide (Fe₂O₃) as per EN 196-2
- h. Total content of Alkali as per EN 196-2.
- i. Magnesium oxide as per EN 196-2.
- j. Soluble phosphate as per Annex C of the standard specification
- k. Total phosphate as per ISO 29581-2

5.3.4.2 Physical Properties

- a. Fineness as per EN 451-2/EN933-10.
- b. Activity Index as per EN 196-1.
- c. Soundness (if required) as per EN 196-3.
- d. Particle Density as per EN 1097-7.
- e. Initial Setting Time as per EN 196-3.
- f. Water Requirement as per Annex B of the standard specification.

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

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 08
General / عام : Level of Confidentiality / درجة السرية	Page 5 of 6

Note: Printed copy of this document shall be treated as 'Uncontrolled'. Always refer the controlled version 'Online

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title:	Certification of Fly Ash for Concrete as per BS EN 450-1: 2012	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2125 (IC)	رقم الوثيقة :	

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.

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 08
General / عام : Level of Confidentiality / درجة السرية	Page 6 of 6

Note: Printed copy of this document shall be treated as 'Uncontrolled'. Always refer the controlled version 'Online