

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title:	Certification of Common Cement Products for Use in Concrete as per BS EN 197-1:2011 - February 2019	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2209 (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	7

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 07
General / عام : Level of Confidentiality / درجة السرية	Page 1 of 7

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

بيانات مفتوحة / OPEN DATA

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title:	Certification of Common Cement Products for Use in Concrete as per BS EN 197-1:2011 - February 2019	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2209 (IC)	رقم الوثيقة:	

Issue Date	Rev. No.	Summary Of Amendments
14-03-2018	0	First draft for comments
10-05-2018	0	Reflect DCLD- PCAS staff comments and feedback
23-10-2018	0	Include DCL – Technical committee feedback and comments
11-11-2018	1	Issue for use
26-03-2019	2	Updated format as per new DM logo
04-08-2020	3	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. Correction of numbering
26/09/2021	4	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.
27/01/2022	5	Updated for the new standard issuance BS EN 197-1:2011 - February 2019.
04/10/2022	6	Changing section name as per the new organizational structure, and replace HOU by CQPSM (Section's Manager). Adding surveillance in 2.4.2.4
27/03/2023	7	Full re-structuring and transfer of common provisions to the general rule. Clauses are re-numbered and document title has been revised accordingly. Use of New DM Logo

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 07
General / عام : Level of Confidentiality / درجة السرية	Page 2 of 7

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 Common Cement Products for Use in Concrete as per BS EN 197-1:2011 - February 2019	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2209 (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 the requirements for 27 distinct common cement, 7 sulfate resisting common cements as well 3 distinct low early strength blast furnace cement and 2 sulfate resistance low early strength blast furnace cement and their constituents which are used usually 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: Cement
- 3.2 Applicable standard/Normative reference: BS EN 197-1: 2011 - February 2019 for Composition, Specification and Conformity Criteria for Common Cement
- 3.3 Additional reference:
ISO 9001 - Quality Management System – Requirements
ISO 19011 - Guidelines for Auditing Management System.

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 07
General / عام : Level of Confidentiality / درجة السرية	Page 3 of 7

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 Common Cement Products for Use in Concrete as per BS EN 197-1:2011 - February 2019	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2209 (IC)	رقم الوثيقة:	

4 DEFINITION OF TERMS

4.1 In addition to the definitions given in BS EN 197-1: 2011 - February 2019 and DM-DCLD-RD-DP21-2001 (IC), the following shall also apply:

4.1.1 Standard Specification – BS EN 197-1: 2011 - February 2019 for Composition, Specification and conformity criteria for common cement

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 client shall have a quality assurance laboratory to carry out factory production control testing to ensure that the raw materials and finished product comply with the requirements of the standard specification.

5.2.1 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 factory shall have the following minimum test equipment to check product compliance with the requirements of standard specification.

- Compression machine
- Digital & weighing balances
- Water bath and hot plate
- Drying oven & Muffle furnace
- Mortar mixer
- Humidity cabinet & Thermo hygrometer
- Chemical analyzer (Online or portable XRF) and/or Wet chemistry instruments.
- Soundness and setting time.
- Blaine fineness apparatus

5.2.2 Ingredients: The cement Ingredients covered shall be as per clause (5) of the standard specification.

5.3 Product Evaluation and testing

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 07
General / عام : Level of Confidentiality / درجة السرية	Page 4 of 7

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

بيانات مفتوحة / OPEN DATA

 GOVERNMENT OF DUBAI	Organization/Unit:	إدارة مختبر دبي المركزي Dubai Central Laboratory Department	الوحدة التنظيمية:	 بلدية دبي Dubai Municipality
	Document Title:	Certification of Common Cement Products for Use in Concrete as per BS EN 197-1:2011 - February 2019	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2209 (IC)	رقم الوثيقة:	

5.3.1 Composition and notation of common cement: It shall comply with clause (6) of standard specification. The products in the family of common cement covered by EN 197-1 and their notation are given in Table (1) in the standard specification. They are grouped into five main cement types as follows:

1. CEM I Portland Cement
2. CEM II Portland – Composite cement
3. CEM III Blast Furnace Cement
4. CEM IV Pozzolanic Cement
5. CEM V Composite Cement

* Note : The composition of each of the products in the family of common cement shall be in accordance With Table (1) in the standard specification

5.3.2 Composition and notation of sulfate resisting common cement (SR- Cements) : the seven products in the family of sulfate resisting common cement , covered by the standard specification are given in Table (2) will be grouped into three main cement types as follows :

A-Sulfate resisting Portland cement :

CEMI – SR0 Sulfate resisting Portland cement (C3A content of the clinker =0%)

CEMI – SR3 Sulfate resisting Portland cement (C3A content of the clinker $\leq 3\%$)

CEMI – SR5 Sulfate resisting Portland cement (C3A content of the clinker $\leq 5\%$)

B-Sulfate resisting blast furnace cement :

CEMIII/B-SR Sulfate resisting Portland cement (No requirement on C3A)

CEMIII/C-SR Sulfate resisting Portland cement (No requirement on C3A)

C-Sulfate resisting pozzolanic cement :

CEMIV/A-SR Sulfate resisting pozzolanic cement (C3A content of the clinker $\leq 9\%$)

CEMIV/B-SR Sulfate resisting pozzolanic cement (C3A content of the clinker $\leq 9\%$)

*Note : The Composition of each of the seven products in the family of the sulfate resisting Common cement shall be in accordance with Table (2).

5.3.3. Composition and notation of low early strength common cements: Low early strength common cements are CEM III blast furnace cements as specified in Table 1 of the standard specification. They differ from other common cements regarding the early strength requirements. Low early strength CEM III cements conforming to the requirements in Table 2 can also be declared as sulfate resisting common cements.

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 07
General / عام : Level of Confidentiality / درجة السرية	Page 5 of 7

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 Common Cement Products for Use in Concrete as per BS EN 197-1:2011 - February 2019	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2209 (IC)	رقم الوثيقة:	

5.3.3 Conformity Criteria

- 5.3.3.1 General Requirements: conformity of the cement products to the standard specification shall be continually evaluated on the basis of testing of spot samples. The properties, test methods and the minimum testing frequencies for the auto control testing by the manufacturer shall be as specified in Table 6 in the standard specification.
- 5.3.3.2 The compliance of the common comments with the requirements of this standard and the stated values (including classes) shall be demonstrated by :
- 1) Initial type testing
 - 2) Factory production control by the manufacturer, including product assessment.
- 5.3.3.3 The mechanical requirements of all cement products shall conform to clause 7.1 and as per the related conformity criteria as per clause 9.2 of the standard specification.
- 5.3.3.4 The physical requirements of all cement products shall conform to clause 7.2 and as per the related conformity criteria as per clause 9.2 of the standard specification.
- 5.3.3.5 The chemical properties of all cement products shall conform to clause 7.3 and Table 4: In addition to the related conformity criteria as per clause 9.2 of the standard specification.
- 5.3.3.6 For the durability requirements shall conform to clause 7.4 of the standard specification.
- 5.3.3.7 The factory shall check conformity criteria for cement composition as per clause 9.3 of the standard specification. The conformity criteria for properties of the cement constituents shall be as per clause 9.4 of the standard specification.
- 5.3.3.8 For single results conformity criteria shall satisfies the values specified in Table 10 of the standard specification.
- 5.3.3.9 Factory production control (Inspection testing plan ITT) for product testing and evaluation (frequency and volume) shall be made by applicant and submitted for DCL review and approval as per be Table 6 of the standard specification.
- 5.3.3.10 The composition of cement shall be checked by the manufacturer at least once per month using a rule, a spot sample taken at the point of release of the cement and shall meet the requirements specified in Table 1 and 2 of the standard specification.

Approved by CQPSM	Authorized by CQPSM
Date of Issue : 27/03/2023	Rev. No. : 07
General / عام : Level of Confidentiality / درجة السرية	Page 6 of 7

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 Common Cement Products for Use in Concrete as per BS EN 197-1:2011 - February 2019	عنوان الوثيقة:	
	Doc Ref.	DM-DCLD-RD-DP21-2209 (IC)	رقم الوثيقة:	

5.3.3.11 CEM cements shall be designated according to clause 8 of the standard specification.

5.3.3.12 CEM cements marking and labeling shall be according to clause ZA.3 of the standard specification.

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

5.4.1 The client shall prepare and submit to DCLD-CQPS for approval of an internal product quality assurance plan giving details of the tests to be carried out at the factory. This will 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

5.4.2 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

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. : 07
General / عام : Level of Confidentiality / درجة السرية	Page 7 of 7

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