

 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 Chloride Inhibitor Admixtures as per ASTM C1582/C1582M-11(2017) e1	عنوان الوثيقة:	
	<b>Doc Ref.</b>	DM-DCLD-RD-DP21-2201 (IC)	رقم الوثيقة:	

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Issue Date	Rev. No.	Summary Of Amendments
01/04/2017	0	First draft for comments
01/06/2017	0	Final draft
18/07/2017	1	Issue for use
26/03/2019	2	Updated format as per new DM template and new DM logo
25/03/2020	3	New amendment as per ASTM C1582/C1582M-11(2017) e1 standard, changing font type and some editorial changes
21/07/2020	4	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. Add provision for accepting valid test reports.
26/09/2021	5	Removal of the documents in clause 2.1.2, in addition to further amendment in the provision for accepting valid test reports ( clause 2.4.2.3 ), 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	6	Changing section name as per the new organizational structure, and replace HOU by CQPSM (Section's Manager)
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

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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 the requirements of Admixtures to Inhibit Chloride-Induced Corrosion Reinforcing Steel in 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: Admixture to inhibit chloride – induced corrosion of reinforcing steel in concrete
- 3.2 Applicable standard/Normative reference: ASTM C1582/C1582M-11(2017)e1 Standard  
Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete.
- 3.3 Additional reference:  
ISO 9001 - Quality Management System – Requirements  
ISO 19011 - Guidelines for Auditing Management System.

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#### 4 DEFINITION OF TERMS

4.1 In addition to the definitions given in ASTM C1582/C1582M-11(2017) e1 and DM-DCLD-RD-DP21-2001 (IC), the following shall also apply:

4.1.1 Standard Specification – ASTM C1582/C1582M-11(2017) e1 Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in 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 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.

5.3 Product Evaluation and testing

5.3.1 Samples drawn for independent test shall meet the requirements of ASTM C1582/C1582M-11(2017) e1 as below detailed:

- Table 1- Physical requirements of concrete containing a chloride – corrosion inhibiting admixture
- Table 2 – Corrosion inhibiting product requirements :

**Either** : As below when tested according ASTM G109

- Mean integrated macrocell current of test beams ,C ≤ 50
- Mean corroded area of test beams , fraction of control
- Visual inspection of bars: The corroded area of the top reinforcing bars extracted from the test beam is less than 1/3 the mean percentage of the corroded area of the control beams.

**OR**

For Corrosion – Inhibiting Performance as below when tested according ASTM G180 :

- Mean 1/Rp compared to control ≤ 1/8
- Average log10(1/Rp) value is 1.0 or less than that of the chloride only average



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

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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.

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