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

1. GENERAL

1.1 INTRODUCTION

1.1.1 This document prescribes the Specific Rules for the implementation of the DM Third Party Product Certification System through factory assessment as applied to the specific product(s) identified herein, taking into consideration the applicable normative references and standard specifications.

1.1.2 The manufacturer–shall comply with these specific rules, and with those already mentioned in the "General Rules for DM Third Party Product Certification Through Factory Assessment", DM-DCLD-RD-DP21-2001 (IC).

1.2 SCOPE

This specific rule applies only to manufacturer of Admixtures to Inhibit Chloride-Induced Corrosion

Reinforcing Steel in Concrete.

1.3 PRODUCT IDENTIFICATION AND APPLICABLE STANDARDS / NORMATIVE REFERENCES

1.3.1 Product name: Admixture to inhibit chloride – induced corrosion of reinforcing steel in concrete

1.3.2 Applicable Standard/Normative Reference: ASTM C1582/C1582M-11 Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete.

1.3.3 Additional References:

1.3.3.1 ISO 9001:2015, Quality Management System – Requirements
1.3.3.2 ISO 19011:2018, Guidelines for Quality and Environmental Management System Auditing

1.4 DEFINITION OF TERMS

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

1.4.1 Independent Testing Laboratory - Dubai Central Laboratory (DCL) or any testing laboratory recognized by the DM Certification Body.

1.4.2 Independent Test – test performed or conducted by an Independent Testing Laboratory

1.4.3 Product Quality Assurance Plan – a document being agreed upon both by the manufacturer and the certification body being used to ensure continuous compliance of the certified product

1.4.4 QMS - Quality Management System aligned with the requirements of ISO 9001 Standard

1.4.5 Manufacturer - is hereby defined as the Applicant for certification and is the brand owner of the corrosion inhibitor admixture .

1.4.6 The manufacturer may have its own factory or may outsource the production to an external factory under a manufacturing agreement.

1.4.7 Factory – is the manufacturing facility where the product of concrete admixture produced. It can be part of the manufacturer or can be an independent external organization.

2. REQUIREMENTS FOR CERTIFICATION

2.1 APPLICATION

2.1.1 Manufacturer shall apply to Dubai Central Laboratory Department for the Certification and authorization to use the DCL Conformity Mark.

2.1.2 Application form DM-DCLD-F-IC-2001 shall be filled-up by the applicant-company and submitted to DCLD together with the following documents

a. Industrial/Trade License
b. Complete product description and specifications
c. Brief Description of Manufacturing Process
d. Copy of the Quality Manual (Controlled Copy)
e. Vicinity Map and Factory Layout
f. Valid Certification to ISO 9001 (If available)
g. List of personnel and their designation
h. Total number of effective personnel involved in manufacture of the product (technical, managerial and support personnel)
i. List of available testing equipment and tests conducted internally
j. Manufacture method statement for adding the admixture

2.2 FACTORY OPERATION

2.2.1 Quality Management System

Manufacturer and the factory of corrosion inhibitor admixture products, including the production facilities, shall have a Quality Management System that is aligned to the requirements of ISO 9001 standard.

NOTE: Certification to ISO 9001 is not a mandatory requirement.

2.2.2 Laboratory for Factory Production Control Testing

Manufacturer and factory of corrosion inhibitor admixture - 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.

The laboratory can be part of the factory production facilities, or, can be through a documented agreement with an external laboratory.

2.3 INITIAL FACTORY AUDIT

2.3.1 DCL duly authorized representative shall conduct an audit of the factory quality management system to verify its compliance with the requirements of ISO 9001.

NOTE: An independent certification to ISO 9001 issued by a QMS certification body recognized by DM may be considered as having satisfied this requirement; however, the DM Certification Body reserves the right to carry out verification audit to confirm that the factory is in compliance with the QMS requirements.

2.3.2 Factory audit shall be conducted by designated audit team in accordance with ISO 19011 – Guidelines for Quality and Environment Management System Auditing.

2.3.3 If the factory is an external factory, the manufacturer shall make the necessary arrangement in order for DCL to audit the factory.

2.4 PRODUCT EVALUATION

2.4.1 Sampling Testing

2.4.1.1 Sample for the initial testing shall be taken randomly by the Audit Team representative from products identified as conforming to the product standard (finished products ready for delivery).

2.4.1.2 Three sets of sample per product per type shall be subjected to testing; the first set, if applicable, will be tested in the factory witnessed by an audit team member, the second set will be sent to independent testing laboratory. The third set will be kept by the manufacturer or factory as reference.

2.4.1.3 Test sample(s) for independent test shall be identified and signed in the presence of an audit team member and shall be submitted to an independent testing laboratory in accordance with the audit team's instructions.

2.4.2 Testing Requirements

2.4.2.1 Samples drawn for independent test shall meet the requirements of ASTM C1582/C1582M-11 as below detailed:

a. Table 1- Physical requirements of concrete containing a chloride – corrosion in hibitong admixture

b. Table 2 – Corrosion inhibiting product requirements :

Either :

As below when tested according ASTM G109 :

1- Mean integrated macrocell current of test beams ,C ≤ 50

2- Mean corroded area of test beams , fraction of control

3- 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

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

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

2.4.2.2 Where appropriate, a comparison shall be made between the manufacturer's routine test

results, results of witness testing and the results of testing by the independent testing laboratory.

2.4.2.3 Independent test shall only be conducted if the result of the in-factory test shows satisfactory result.

2.4.2.4 If the result of the test conducted by the independent testing laboratory shows non-conformance to the specified requirements, the provision for rejection specified in Clause 9 in ASTMC1582/C1582M-11 standard shall apply. The retest shall be carried out on the reference sample kept by the manufacturer or factory OR on new samples collected by DM Certification Body , on which full testing shall be carried out, if necessary.

2.4.2.5 If the retest passed, the initial product assessment is considered conforming to product specification. If not, the manufacturer will be advised to take corrective action.

2.4.2.6 Only after re-assessment and subsequent product compliance shall the manufacturer be Allowed to use the DCL Conformity Mark on his product.

3. GRANTING OF THE DCL CERTIFICATE OF CONFORMITY

3.1 CONDITIONS FOR GRANTING THE DCL CERTIFICATE OF CONFORMITY

3.1.1 When the results of the factory audit (clause 2.3) and product evaluation (clause 2.4) show conformity to the requirements specified in the General Rule and Specific Rule, the Certificate of Conformity and authorization to use the DCL Conformity Mark shall be issued to the manufacturer for the type(s) and size of the product covered by the assessment.

3.1.2 The manufacturer and factory shall agree with the DM Certification Body for the preparation and implementation of a product quality assurance plan to ensure continuing compliance with the Standard Specifications and the requirements of this certification scheme. It shall consist of (1) an internal factory production control plan, and (2) an independent testing plan.

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

The manufacturer shall prepare and submit to DM Certification Body for approval a factory production control system (internal product quality assurance plan).

The plan shall take into consideration the production process, the volume of production, the criticality of the test to be specified as a minimum,

3.1.4 Independent Testing Plan

The manufacturer shall agree to an independent testing plan to be carried out on samples which are collected in accordance with DM-DCLD-RD-DP21-2096 (IC) – Surveillance of Certified Establishments under the Factory Assessment Scheme, and implemented by the DM Certification Body. The cost of testing under the independent testing plan shall be borne by the manufacturer.

3.2 ISSUANCE OF DCL CERTIFICATE OF CONFORMITY

If the conditions mentioned in clause 3.1 above have been complied, the manufacturer shall be issued a DCL Certificate of Conformity and a Scope of Certification that covers the category, class, groups and levels of the products that are certified.

3.3 RESPONSIBILITIES OF THE MANUFACTURER

3.3.1 The manufacturer shall ensure that his product, for which a certificate has been issued, conforms at all times to the requirements of the General Rule and Specific Rules and shall maintain to the satisfaction of DCL, a system of factory production control including inspection and testing.

3.3.2 The manufacturer shall give the duly authorized representative(s) of DCL, access during working hours, without prior notification, to the premises of the factory where certified product is manufactured, for the purpose of evaluating the materials, production processes, finished products, quality assurance facilities, records and others in accordance with the requirements of the certification scheme.

3.3.3 The manufacturer shall inform the DM Certification Body in writing of any change of management, transfer of plant site, modification in the product, manufacturing process or factory quality management system.

3.3.4 In case of transfer of factory location, the certificate shall be deemed valid only after factory and product audit at the new site has been satisfactorily completed.

3.3.5 Any violation of the Terms and Conditions of Certification shall constitute sufficient grounds for suspension or withdrawal of the certification in accordance with DM-DCLD-IMS-RD-07.

3.3.6 Any dispute that may arise in connection with the Terms and Conditions of the DCL Mark shall be settled in accordance with DM-DCLD-IMS-RD-08 Appeals, Disputes, and Complaints Procedure.

3.3.7 The manufacturer shall pay all applicable fees related to the certification process.

3.4 USE OF THE DCL CONFORMITY MARK

3.4.1 The design and use of the DCL Conformity Mark shall be in accordance with the Terms and Conditions for the Use of the DCL Conformity Mark, DM-DCLD-IMS-RD-13

3.4.2 The manufacturer shall submit samples of tag showing the DCL Conformity Mark, for approval by the DM Certification Body.

3.4.3 The Certificate of Conformity and the authorization to use the DCL Certification Mark is non-transferable.

4 SURVEILLANCE

4.1 DM Certification Body shall carry out periodic surveillance to ensure consistent compliance with the requirements of this certification scheme as per DM-DCLD-RD-DP21-2096 (IC) – Surveillance of Certified Establishments under the Factory Assessment Scheme.

4.2 Testing as part of surveillance shall be in accordance with the Independent Testing Plan (clause 3.1.4) that has been agreed between the DCLD and the factory.

5 FEE SCHEDULE

5.1 The manufacturer shall pay the applicable fees and charges related to the granting of the certificate of conformity to use the DCL Conformity Mark based on the applicable DCL Official Fee Structure, DM-DCLD-RD-DP21-2074 (IC).

5.2 The fees for this certification scheme shall include but not limited to the following;

5.1.1 Application Fee
5.1.2 Initial Assessment Fee
5.1.3 Certification Fee
5.1.4 Marking Fee
5.1.5 Surveillance Fee
5.1.6 Annual Renewal Fee
5.1.7 Testing Fee