ISO 10683:2014-05 (E)

Fasteners - Non-electrolytically applied zinc flake coatings

Contents

Page

Foreword iv

Introduction vi

1 Scope 1

2 Normative references 1

3 Terms and definitions 2

4 General characteristics of the coating 2
4.1 Zinc flake coating systems 2
4.2 Composition of the systems 2
4.3 Mechanical and physical properties and curing 2
4.4 Avoidance of internal hydrogen embrittlement 3
4.5 Coating systems and coating processes 3

5 Corrosion protection and testing 3
5.1 General 3
5.2 Neutral salt spray test 3
5.3 Sulfur dioxide test (Kesternich test) 4
5.4 Bulk handling, automatic processes such as feeding and/or sorting, storage and transport 4

6 Dimensional requirements and testing 4
6.1 General 4
6.2 Bolts, screws, studs and nuts with ISO metric threads 5
6.3 Other fasteners 6

7 Mechanical and physical properties and testing 6
7.1 Appearance 6
7.2 Corrosion resistance related to temperature 6
7.3 Test methods for thickness or coating weight determination 6
7.4 Ductility 7
7.5 Adhesion/cohesion 7
7.6 Sacrificial cathodic protection 7
7.7 Torque/tension relationship 7
7.8 Determination of hexavalent chromium 8

8 Applicability of tests 8
8.1 General 8
8.2 Tests mandatory for each lot 8
8.3 Tests for in-process control 8
8.4 Tests to be conducted when specified by the purchaser 8

9 Designation 9
9.1 Designation of zinc flake coating systems for the order 9
9.2 Designation of zinc flake coating systems for labelling 9

10 Ordering requirements 10

Annex A (informative) Design aspects and assembly of coated fasteners 11

Annex B (informative) Coating thickness and thread clearance for ISO metric screw threads 15

Annex C (informative) Control of the corrosivity of the cabinet for neutral salt spray test for coated fasteners 22

Bibliography 30