

# DIN EN ISO 10683:2014-10 (E)

## Fasteners - Non-electrolytically applied zinc flake coatings (ISO 10683:2014)

---

<b>Contents</b>		<b>Page</b>
Foreword .....		3
Introduction .....		4
<b>1</b>	<b>Scope .....</b>	<b>5</b>
<b>2</b>	<b>Normative references .....</b>	<b>5</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>6</b>
<b>4</b>	<b>General characteristics of the coating .....</b>	<b>6</b>
4.1	Zinc flake coating systems .....	6
4.2	Composition of the systems .....	6
4.3	Mechanical and physical properties and curing .....	6
4.4	Avoidance of internal hydrogen embrittlement .....	7
4.5	Coating systems and coating processes .....	7
<b>5</b>	<b>Corrosion protection and testing .....</b>	<b>7</b>
5.1	General .....	7
5.2	Neutral salt spray test .....	7
5.3	Sulfur dioxide test (Kesternich test) .....	8
5.4	Bulk handling, automatic processes such as feeding and/or sorting, storage and transport .....	8
<b>6</b>	<b>Dimensional requirements and testing .....</b>	<b>8</b>
6.1	General .....	8
6.2	Bolts, screws, studs and nuts with ISO metric threads .....	9
6.3	Other fasteners .....	10
<b>7</b>	<b>Mechanical and physical properties and testing .....</b>	<b>10</b>
7.1	Appearance .....	10
7.2	Corrosion resistance related to temperature .....	10
7.3	Test methods for thickness or coating weight determination .....	10
7.4	Ductility .....	11
7.5	Adhesion/cohesion .....	11
7.6	Sacrificial cathodic protection .....	11
7.7	Torque/tension relationship .....	11
7.8	Determination of hexavalent chromium .....	12
<b>8</b>	<b>Applicability of tests .....</b>	<b>12</b>
8.1	General .....	12
8.2	Tests mandatory for each lot .....	12
8.3	Tests for in-process control .....	12
8.4	Tests to be conducted when specified by the purchaser .....	12
<b>9</b>	<b>Designation .....</b>	<b>13</b>
9.1	Designation of zinc flake coating systems for the order .....	13
9.2	Designation of zinc flake coating systems for labelling .....	13
<b>10</b>	<b>Ordering requirements .....</b>	<b>14</b>
<b>Annex A (informative) Design aspects and assembly of coated fasteners .....</b>		<b>15</b>

<b>Annex B (informative) Coating thickness and thread clearance for ISO metric screw threads .....</b>	<b>19</b>
<b>Annex C (informative) Control of the corrosivity of the cabinet for neutral salt spray test for coated fasteners .....</b>	<b>26</b>
<b>Bibliography .....</b>	<b>34</b>