

DIN EN 13438:2013-12 (E)

Paints and varnishes - Powder organic coatings for hot dip galvanised or sherardised steel products for construction purposes

Contents		Page
Foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	7
4	Substrate material	8
5	Coating powder	8
5.1	Identification	8
5.2	Storage	8
5.3	Performance requirements	9
5.3.1	General	9
5.3.2	Colour	9
5.3.3	Gloss	9
5.3.4	Adhesion	9
5.3.5	Resistance to scratching	9
5.3.6	Resistance to deformation	9
5.3.7	Resistance to mortar	9
5.3.8	Resistance to weathering	9
5.3.9	Resistance to humidity	10
5.3.10	Resistance to sulfur dioxide	10
5.3.11	Permeability	10
5.3.12	Resistance to salt spray	10
5.4	Health and safety information	10
6	Application	11
6.1	Cleaning and pretreatment of the hot dip galvanised or sherardised substrate	11
6.2	Coating powder	11
6.3	Application of coating powder	11
6.4	Significant surfaces of coated article	11
6.5	Performance requirements of the powder coated article	11
6.5.1	General	11
6.5.2	Surface appearance	11
6.5.3	Colour	11
6.5.4	Thickness	11
6.5.5	Gloss	12
6.5.6	Adhesion	12
7	Certificate of conformity	12
Annex A (normative)	Methods of test for coating powders	15
A.1	General	15
A.2	Sampling	15
A.3	Coated test panels	15
A.3.1	Material and dimensions	15

A.3.2	Pretreatment	15
A.3.3	Coating of the test panels	15
A.3.4	Determination of thickness	15
A.3.5	Appearance and conditioning	16
A.4	Test procedures on coated test panels	16
A.4.1	Surface	16
A.4.2	Colour	16
A.4.3	Gloss	16
A.4.4	Adhesion	16
A.4.5	Resistance to scratching	17
A.4.6	Resistance to deformation	17
A.4.7	Resistance to mortar	17
A.4.8	Resistance to weathering	17
A.4.9	Resistance to humidity	17
A.4.10	Resistance to sulfur dioxide	18
A.4.11	Permeability	18
A.4.12	Resistance to salt spray	18
Annex B (informative) Guidance on cleaning and pretreatment processes		19
B.1	Cleaning	19
B.2	Pretreatment	19
B.3	Types of pretreatment	19
B.3.1	Conversion and drying of the conversion coating (chemical pretreatment)	19
B.3.2	Mechanical pretreatment	20
Annex C (informative) Guidelines on the powder coating process		21
Annex D (normative) Methods of test for powder coatings		22
D.1	General	22
D.2	Test piece preparation	22
D.3	Test procedures on finished articles	22
D.3.1	Surface appearance	22
D.3.2	Colour	22
D.3.3	Thickness	22
D.3.4	Gloss	22
D.3.5	Adhesion	22
D.4	Test procedures on test panels	23
Annex E (informative) Guidelines on the care and protection of powder coated hot dip galvanised or sherardised steel components		24
E.1	Packing and handling	24
E.2	Tapes	24
Bibliography		25