

DIN EN ISO 2808:2007-05 (E)

Paints and varnishes - Determination of film thickness (ISO 2808:2007)

Contents		Page
Foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	6
4	Determination of wet-film thickness	8
4.1	General	8
4.2	Mechanical methods	8
4.2.1	Principle	8
4.2.2	Field of application	8
4.2.3	General	8
4.2.4	Method 1A -- Comb gauge	9
4.2.5	Method 1B -- Wheel gauge	10
4.2.6	Method 1C -- Dial gauge	11
4.3	Gravimetric method	12
4.3.1	Principle	12
4.3.2	Field of application	12
4.3.3	General	12
4.3.4	Method 2 -- By difference in mass	12
4.4	Photothermal method	13
4.4.1	Principle	13
4.4.2	Field of application	13
4.4.3	General	14
4.4.4	Method 3 -- Determination using thermal properties	14
5	Determination of dry-film thickness	14
5.1	General	14
5.2	Mechanical methods	14
5.2.1	Principle	14
5.2.2	Field of application	15
5.2.3	General	15
5.2.4	Method 4A -- By difference in thickness	16
5.2.5	Method 4B -- Depth gauging	18
5.2.6	Method 4C -- Surface profile scanning	20
5.3	Gravimetric method	21
5.3.1	Principle	21
5.3.2	Field of application	21
5.3.3	General	21
5.3.4	Method 5 -- By difference in mass	21
5.4	Optical methods	22
5.4.1	Principle	22
5.4.2	Field of application	23
5.4.3	General	23
5.4.4	Method 6A -- Cross-sectioning	24
5.4.5	Method 6B -- Wedge cut	25
5.5	Magnetic methods	25
5.5.1	General	25

5.5.2	Principle	25
5.5.3	Field of application	25
5.5.4	General	26
5.5.5	Method 7A -- Magnetic pull-off gauge	26
5.5.6	Method 7B -- Magnetic-flux gauge	27
5.5.7	Method 7C -- Magnetic-induction gauge	27
5.5.8	Method 7D -- Eddy-current gauge	28
5.6	Radiological method	29
5.6.1	Principle	29
5.6.2	Field of application	29
5.6.3	General	29
5.6.4	Method 8 -- Beta backscatter method	30
5.7	Photothermal method	30
5.7.1	Principle	30
5.7.2	Field of application	31
5.7.3	General	31
5.7.4	Method 9 -- Determination using thermal properties	32
5.8	Acoustic method	32
5.8.1	Principle	32
5.8.2	Field of application	32
5.8.3	General	32
5.8.4	Method 10 -- Ultrasonic thickness gauge	33
6	Determination of thickness of uncured powder layers	33
6.1	General	33
6.2	Gravimetric method	34
6.2.1	Principle	34
6.2.2	Field of application	34
6.2.3	General	34
6.2.4	Method 11 -- By difference in mass	34
6.3	Magnetic methods	34
6.3.1	Principle	34
6.3.2	Field of application	34
6.3.3	General	35
6.3.4	Method 12A -- Magnetic-induction gauge	35
6.3.5	Method 12B -- Eddy-current gauge	36
6.4	Photothermal method	36
6.4.1	Principle	36
6.4.2	Field of application	36
6.4.3	General	36
6.4.4	Method 13 -- Determination using thermal properties	36
7	Measurement of film thickness on rough surfaces	37
7.1	General	37
7.2	Apparatus and materials	38
7.3	Procedure	38
7.3.1	Verification	38
7.3.2	Measurement	38
7.3.3	Number of readings	38
8	Test report	38
	Annex A (informative) Overview of methods	40
	Bibliography	43