

Contents

Page

POLSKI KOMITET NORMALIZACYJNY 2024

European foreword.....	5
Introduction	7
1 Scope.....	8
2 Normative references.....	8
3 Terms and definitions	8
4 Preparation of laboratory samples	10
5 Determination of binder content	10
5.1 General principles of test	10
5.2 Binder extraction	10
5.2.1 Solvent.....	10
5.2.2 Apparatus.....	11
5.2.3 Procedure.....	11
5.3 Separation of mineral matter	11
5.3.1 Apparatus.....	11
5.3.2 Procedure.....	11
5.4 Binder quantity.....	12
5.4.1 Apparatus.....	12
5.4.2 Procedure.....	12
5.5 Calculation and expression of results.....	12
5.5.1 General.....	12
5.5.2 Binder content determined by difference.....	12
5.5.3 Binder content by total recovery.....	12
5.5.4 Binder content by recovery from portion (volume calculation)	13
5.5.5 Binder content by recovery from portion (mass calculation)	13
6 Drying to constant mass	14
6.1 General.....	14
6.2 Apparatus.....	14
6.3 Procedure.....	14
7 Reporting of results.....	14
7.1 Results.....	14
7.2 Test report.....	15
8 Precision data.....	15
8.1 General.....	15
8.2 Precision — Experiment 1	15
8.3 Precision — Experiment 2	16
8.4 Precision — Experiment 3	17
8.5 Precision — Experiment 4	17
8.6 Precision — Experiment 5	17
Annex A (informative) Guidance on the determination of binder content	18
A.1 Evaluation of the results.....	18
A.2 Effect of water content	19
A.3 Choice of test equipment and the sequence of operations.....	19

A.4	Determination of total binder content.....	19
Annex B (normative) Use of equipment for the determination of binder content		21
B.1	Binder extraction.....	21
B.1.1	Hot extractor (paper filter) method	21
B.1.2	Hot extractor (wire mesh filter) method	26
B.1.3	Soxhlet extractor method	27
B.1.4	Bottle rotation machine method	29
B.1.5	Centrifuge extractor method	32
B.1.6	Cold mix dissolution of bitumen by agitation.....	34
B.1.7	Automatic extractor method	35
B.2	Separation of mineral matter.....	36
B.2.1	Continuous flow centrifuge	36
B.2.2	Pressure filter	38
B.2.3	Bucket type centrifuge — Type 1.....	39
B.2.4	Bucket type centrifuge — Type 2.....	41
B.3	Soluble binder content	41
B.3.1	Method by recovery from a portion using a volume calculation.....	41
B.3.2	Method by recovery from a portion using a mass calculation.....	44
Annex C (normative) Determination of residual mineral matter in the binder extract by incineration		45
C.1	General	45
C.2	Method 1	45
C.2.1	Apparatus	45
C.2.2	Reagent.....	45
C.2.3	Procedure	45
C.3	Method 2	46
C.3.1	Apparatus	46
C.3.2	Procedure	46
Annex D (informative) Guidance on determination of soluble binder content of mixtures with polymer-modified binders		48
D.1	General	48
D.2	Preparatory treatment of laboratory samples of bituminous mixtures	48
D.3	Determination of binder content.....	48
D.3.1	General principles of test.....	48
D.3.2	Binder extraction.....	48
D.3.3	Separation of mineral matter.....	50
D.3.4	Binder quantity	51

D.3.5	Calculation and expression of results.....	51
D.4	Drying to constant mass	51
D.5	Reporting of results.....	51
D.6	Precision data.....	51
	Bibliography.....	52