DIN EN 13859-1:2010-11 (E)

Flexible sheets for waterproofing - Definitions and characteristics of underlays - Part 1: Underlays for discontinuous r oofing

Contents

Page

Foreword 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 6

4 Product characteristics 7
4.1 General 7
4.2 Dimensions, straightness and mass per unit area 7
4.3 Application related characteristics 7
4.3.1 Reaction to fire 7
4.3.2 Resistance to water penetration 7
4.3.3 Water vapour transmission properties 8
4.3.4 Tensile properties 8
4.3.5 Resistance to tearing 8
4.3.6 Dimensional stability 8
4.3.7 Flexibility at low temperature (pliability) 8
4.3.8 Artificial ageing behaviour 8
4.3.9 Resistance to penetration of air 8
4.3.10 Watertightness of seams 8
4.4 Dangerous substances 9

5 Testing 9
5.1 Sampling 9
5.2 Test methods 9
5.2.1 Determination of dimensions, straightness and mass per unit area 9
5.2.2 Determination of reaction to fire 9
5.2.3 Determination of resistance to water penetration Class W1 9
5.2.4 Determination of resistance to water penetration Class W2 10
5.2.5 Determination of water vapour transmission properties 10
5.2.6 Determination of tensile properties 10
5.2.7 Determination of resistance to tearing (nail shank) 10
5.2.8 Determination of dimensional stability 10
5.2.9 Determination of flexibility at low temperature (pliability) 10
5.2.10 Determination of resistance to artificial ageing 10
5.2.11 Determination of resistance to penetration of air 10
5.2.12 Watertightness of seams 11

6 Evaluation of conformity 11
6.1 General 11
6.2 Initial type testing 11
6.2.1 General 11
6.2.2 Sampling 11
6.2.3 Test results 11
6.3 Factory production control (FPC) 11
6.3.1 General 11
6.3.2 Frequency of testing 12

7 Product data sheet and designation 12

8 Marking, labelling and packaging 12

Annex A (normative) Determination of tensile properties 13

A.1 General 13
A.2 Apparatus 13
A.3 Sampling 13
A.4 Preparation of test specimens 13
A.5 Procedure 13
A.6 Expression and evaluation of results 14
A.7 Test report 15

Annex B (normative) Determination of resistance to tearing 16

B.1 General 16
B.2 Apparatus 16
B.3 Sampling 16
B.4 Preparation of test specimens 16
B.5 Procedure 16
B.6 Expression and evaluation of results 17
B.7 Test report 17

Annex C (normative) Artificial ageing by exposure to UV and heat 18

C.1 General 18
C.2 Principle 18
C.3 Apparatus 18
C.3.1 Apparatus for exposure to UV-A irradiation and elevated temperature 18
C.3.2 Apparatus for exposure to heat 18
C.4 Preparation of test specimens 18
C.4.1 Dimensions of test specimens 18
C.4.2 Number of specimens 18
C.4.3 Conditioning of test specimens 19
C.5 Procedure 19
C.5.1 Exposure to UV irradiation and elevated temperature 19
C.5.2 Exposure to heat 19
C.5.3 Testing of resistance to water penetration and tensile properties after artificial ageing 19
C.6 Expression of results 19
C.7 Test report 19

Annex D (normative) Initial type test and frequencies of testing for factory production control 21

Annex E (informative) Example of a product data sheet 22

E.1 General information 22

Annex F (normative) Determination of the watertightness of seams 24

F.1 General 24
F.2 Definitions 24
F.2.1 Watertightness of seams 24
F.3 Procedure 24
F.4 Apparatus 24
F.4.1 General 24
F.4.2 Sealing gaskets 24
F.5 Preparation of the test specimens 24
F.6 Procedure 25
F.7 Evaluation 25
F.8 Test report 25

Annex ZA (informative) Clauses of this European Standard addressing provision of the Construction Products Directive (CPD) 26

ZA.1 Scope and relevant characteristics 26

ZA.2 Procedures for attestation of conformity of underlays for discontinuous roofing 27

ZA.2.1 Systems of attestation of conformity 27

ZA.2.2 EC Declaration of conformity 30

ZA.3 CE marking and labelling 31

Bibliography 34