DIN EN ISO 12572:2017-05 (E)

Hygrothermal performance of building materials and products - Determination of water vapour transmis sion properties - Cup method (ISO 12572:2016)

Contents

Page

European foreword ... **4**

Foreword ... **5**

1 Scope ... **6**

2 Normative references ... **6**

3 Terms, definitions, symbols, units and subscripts ... **6**
3.1 Terms and definitions ... 6
3.2 Symbols and units ... 7
3.3 Subscripts ... 8

4 Principle ... **8**

5 Apparatus ... **8**

6 Test specimens ... **9**
6.1 General principles for preparation of test specimens ... 9
6.2 Dimensions of test specimens ... 9
6.2.1 Shape and fit ... 9
6.2.2 Exposed area ... 9
6.2.3 Thickness of test specimens ... 9
6.3 Number of test specimens ... 10
6.4 Conditioning of test specimens ... 10
6.5 Testing low resistance specimens ... 10

7 Procedure ... **10**
7.1 Test conditions ... 10
7.2 Preparation of specimen and test assembly ... 12
7.3 Test procedure ... 12

8 Calculation and expression of results ... **13**
8.1 Mass change rate ... 13
8.2 Density of water vapour flow rate ... 14
8.3 Water vapour permeance ... 14
8.4 Water vapour resistance ... 15
8.5 Water vapour permeability ... 15
8.6 Water vapour resistance factor ... 15
8.7 Water vapour diffusion-equivalent air layer thickness ... 16

9 Accuracy of measurement ... **16**
9.1 General ... 16
9.2 Specimen area ... 16
9.3 Specimen thickness ... 16
9.4 Sealants ... 17
9.5 Weighing precision ... 17
9.6 Control of environmental conditions ... 17
9.7 Variations in barometric pressure during test ... 17

10 Test report ... **17**

Annex A (normative) **Methods suitable for self-supporting materials** ... **19**

Annex B (normative) **Methods suitable for loose fills** ... **21**

Annex C (normative) **Methods suitable for membranes and foils** ... **23**

Annex D (normative) **Methods suitable for mastics and sealants** ... **24**

Annex E (normative) **Methods suitable for paint, varnishes, etc.** ... **26**

Annex F (normative) **Correction for the effect of a masked edge of a specimen** **27**
Annex G (normative) **Correction for resistance of air layers** **29**
Annex H (normative) **Method for calculating the water vapour resistance of the air layer in the cup** **30**
Annex I (informative) **Weighing repeatability, weighing interval and specimen size needed to achieve desired accuracy** **31**
Annex J (informative) **Conversion table for water vapour transmission units** **32**
Bibliography **33**