

DIN 18542:2020-04 (E)

Impregnated sealing tapes made of cellular plastics for sealing of outside wall joints - Requirements and testing

Contents	Page
Foreword	4
1 Scope	5
2 Normative references	5
3 Terms and definitions.....	6
4 Joint geometry.....	7
5 Classification.....	8
6 Requirements.....	9
6.1 Airtightness.....	9
6.2 Tightness of joints against driving rain	10
6.3 Tightness of joint intersections against driving rain.....	10
6.4 Protection of the functional layer	10
6.5 Resistance to temperature fluctuations.....	11
6.6 Resistance to light and moisture.....	11
6.7 Compatibility with adjacent materials.....	11
6.8 Resistance to condensation	11
6.9 Water vapour permeability	11
6.10 Thermal conductivity.....	12
6.11 Fire behaviour.....	12
7 Selection of test specimens, transferability.....	14
8 Testing	16
8.1 General	16
8.2 Airtightness.....	16
8.3 Tightness of joints to driving rain.....	16
8.4 Tightness of joint intersections to driving rain.....	16
8.5 Protection of the functional layer	17
8.6 Resistance to temperature fluctuations.....	17
8.7 Resistance to light and moisture.....	18
8.8 Compatibility with adjacent materials.....	18
8.9 Resistance to condensation	19
8.10 Water vapour permeability	19
8.11 Thermal conductivity.....	19
8.12 Fire behaviour.....	20
8.13 Test report.....	20
8.14 Figures relating to tests.....	21
9 Designation	25
9.1 Impregnated joint sealing tape.....	25
9.2 Multifunctional sealing tape	26
10 Re-qualification	26
Annex A (normative) Determination of the joint permeability coefficient a	27
A.1 General	27
A.2 Measuring the joint permeability per unit length V_L in $\text{m}^3/(\text{h} \cdot \text{m})$	28

A.3	Determining the joint permeability coefficient a by means of regression	28
A.4	Graphical representation of the measured values	29
Annex B	(informative) Recommendations for the correct use and processing of impregnated joint sealing tapes and multifunctional sealing tapes made of cellular plastic.....	30
B.1	General.....	30
B.2	Processing tips for impregnated joint sealing tapes and multifunctional joint sealing tapes	31
Annex C	(informative) Recommendations on alternative test methods for impregnated cellular plastic joint sealing tapes and multifunctional sealing tapes for requalification purposes	34
C.1	Information in the report	34
C.2	Alternative test methods.....	34
	Bibliography	36

Figures

Figure 1	— Joint geometry	7
Figure 2	— Examples of applications for exposure classes BG 1, BG 2 and BG R as well as MF 1 and MF 2	9
Figure 3	— Airtightness requirements for exposure classes BG 1, BG 2 and BG R as well as MF 1 and MF 2	10
Figure 4	— Rule for transferral to other tape dimensions of the same tape type (example).....	15
Figure 5	— Test specimen for testing as in 8.2 and 8.3.....	21
Figure 6	— Test specimen for testing as in 8.4.....	22
Figure 7	— Test specimen for testing as in 8.6 and 8.9.....	23
Figure 8	— Specimen holder for testing resistance to light and moisture as in 8.7.....	24
Figure 9	— Test cup with specimen for determining water vapour permeability as in 8.10.....	25
Figure A.1	— Representation of measured values	27
Figure B.1	— Recommendations for the correct joint sealing tape cross-section	30
Figure B.2	— Example of the dimensions of a joint sealing tape size 35/15-30	32
Figure B.3	— Corners and intersections.....	32
Figure B.4	— Longitudinal joints	33
Figure B.5	— Fixing joint sealing tapes with wedges.....	33

Tables

Table 1	— Exposure classes.....	8
Table 2	— Requirements	13
Table 3	— Selection of test specimens	14
Table 4	— Example of selection of test specimens according to product range.....	16
Table A.1	— Comparison between DIN EN 12114 and DIN 18542	28
Table B.1	— Guideline values for joint widths b for connecting joints at windows	31