

# DIN 18542:2020-04 (E)

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

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