

# Hanno® Triple-Layer Joint Sealing System

HANNO products for window, door, façade, ACM panel and roofing applications



## HANNO: High Quality – Hidden Talents

125 years of experience, state-of-the-art equipment as well as a highly trained and motivated team guarantee innovative and high quality products "made in Germany" for today's demanding construction world. HANNO offers a wide range of certified and proven product solutions to seal building construction joints – tested to the highest European and relevant American standards for Hannoband® including ASTM E283, ASTM E330, ASTM E331, ASTM E547 and ASTM E84.

HANNO products are suitable for window, door, façade, ACM panel and roof applications – Passive House compliant!



#### 1 VW Nutzfahrzeuge

Hannover, Germany Joints sealed with Hannoband®-BG1 in brick construction. Joint width up to 1 inch.

#### 2 Skyscraper "Het Strijkijzer"

The Hague, Netherlands Joints exposed to direct weathering and exceeding >300' elevation sealed with Hannoband® BG1.

#### (3) Le Belvedere

Quebec, Canada Built to Passive House standard using Hannoband®-BG1 and Hannoband®-3E.

#### (4) Stadion Linden

Hannover, Germany
Cross joints sealed with Hannoband®-BG1 in concrete construction.
Joint width up to 2 inches.

#### 5 Hahne's Building

Newark, NJ - USA Window joints sealed with Hannoband®-BG1.

#### 6 B. Braun Melsungen AG

Melsungen, Germany Weather protection layer and inner layer sealed with Hanno® flashing tapes.











## Advantages at a Glance

- Extremely durable performance (BG1 > 15 years)
- Driving rain & air tight (3E/3E BG1)
- Diffusion open, breathable (BG1) / water vapor flexible (multi-functional tapes, foil tapes)
- Excellent thermal and sound insulation
- BG1 rated products are resistant to UV-rays and sun exposure
- ASTM tested
- Sustainable & safe extremely low VOC's
- Absolutely clean, quick and easy installation during all seasons
- Very little waste
- Quality and performance has been proven for decades



Quick and easy installation during all seasons:



Hannoband® adjusts to uneven surfaces within each tape's specific tolerance range:



### Hanno®

### Triple-Layer Joint Sealing System

Weather protection layer
 For driving rain tightness:
 Hannoband®-BG1 or
 Hanno®-DUO Easy flashing tape

 Function layer
 For thermal and sound insulation:
 Hannoband®-THERM or PU-spray foam

 Inner layer
 For airtightness:
 Hanno®-DUO Easy flashing tape

Hannoband®-BG1 and 3E BG1 are resistant to UV-rays and sun exposure.



The Hanno® Triple-Layer Joint Sealing System ensures tested joint sealing of windows suitable for all kind of buildings including Passive Houses in order to reduce energy costs and provides long-term performance and reliability of the sealed joint. In addition, the product range comprises high-quality flashing tapes for windows with vapor pressure gradient, several complementary products such as sealing compounds, adhesives and polyurethane foams as well as special Roller Shade Housing for air absorption and heat insulation.



**HANNO**Passive House study



Ideal for an easy and reliable sealing of windows and doors during any weather, the "all-in-one" multifunctional tapes are the optimum choice. Their "moisture-adapting" membranes ensure that the joint can dry out all year. These highly innovative tapes provide an excellent thermal, sound, air and rain barrier. After their installation, the polyurethane soft foam expands in the joint and provides a durable joint sealing. Movements of building components – e.g. linked to temperature changes – are compensated even after many years.

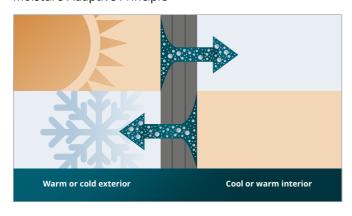
- Resistant to driving rain up to 22 psf
- Airtight at 50 Pa in service certified by ift Rosenheim with 0.02 m³/(hm)
- Moisture adapting μ-value (7-44) provides optimum moisture management in the joint
- Thermal conductivity 0.297\*in/h\*ft²\*F (λ = 0.0428 W/m·K) for Passive House thermal bridges calculated
- Joint sound insulation value R<sub>ST,W</sub> max. 58 dB
- Extremely low VOC's: EMICODE EC1<sup>PLUS</sup> tested (< 5 TVOC [µg/m³])</li>
- 3E BG1: UV-resistant and B1 fire rated acc. to DIN 4102

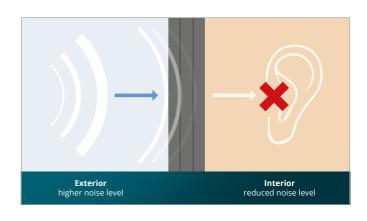


Multi-Functional Tape Hannoband®-3E / 3E BG1 Installation Video

\* only Hannoband®-3E BG1

#### Moisture-Adaptive Principle







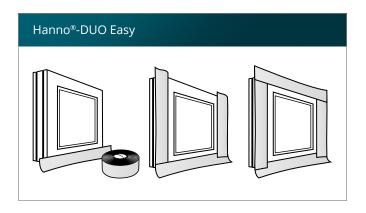
Hanno®-DUO Easy flashing tape was designed primarily for curtain window elements often found in low energy constructions. Hanno®-DUO Easy+ has an additional adhesive strip on the opposite side and therefore replaces conventional film tapes for many applications. Both tapes are moisture adaptive, which makes them suitable for exterior and interior applications. The  $s_d$  value ranges between 0.48 and 12.0 m. The high level of driving rain resistance > 1,050 Pa protects the joint on the exterior. On the interior, DUO Easy provides an air-tight barrier of  $a_n \le 0.1$ . Both variants can also be installed during the cold season at temperatures as low as  $14 \,^{\circ}\text{F}$  (- $10 \,^{\circ}\text{C}$ ).\*

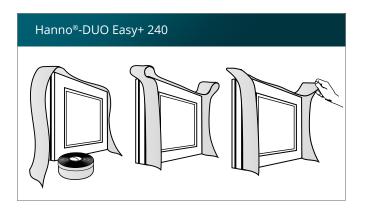
- For interior and exterior applications providing an optimal vapor/moisture management
- Moisture adapting  $s_d$  value provides optimum moisture management in the joint:  $s_d$  value 0.48 ≤  $s_d$  ≤ 12.0 m
- Driving rain tight up to 22 psf and air tight a<sub>n</sub> < 0.1</li>
- Strong adhesive layer on the tape for gluing at every surface without a primer
- Processing temperature 14 °F to 104 °F (-10 °C to +40 °C)
- Can be plastered/rendered over

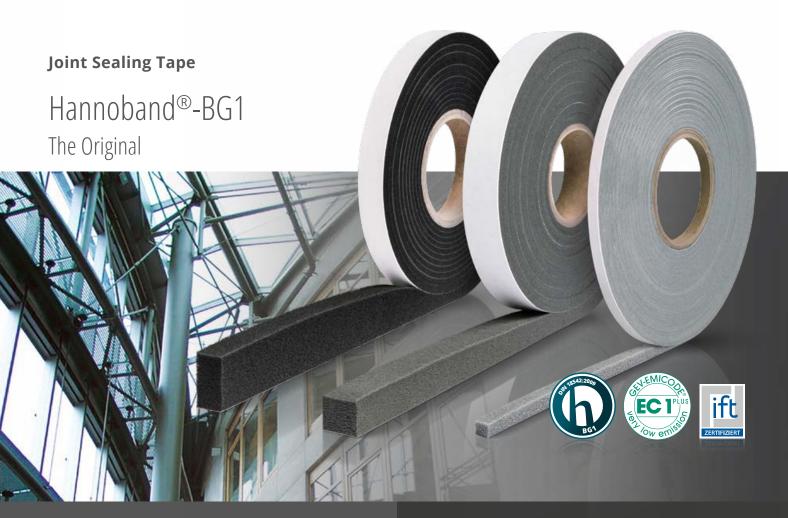


Flashing Tape Hanno®-DUO Easy Installation Video

\* Make sure that no parting plane (e.g., moisture, ice or hoar frost) is present on the gluing surface, which prevents the bonding of the adhesive to the surface.







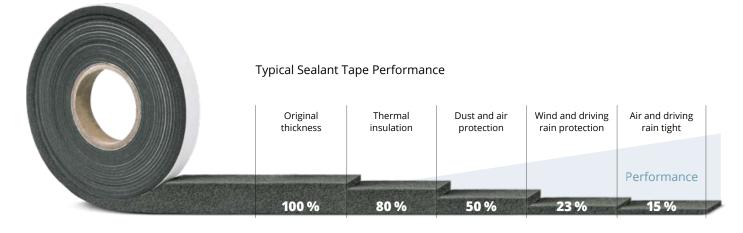
Extremely durable Hannoband®-BG1 clearly exceeds the requirements for protection against driving rain, airtightness and resistance to weathering according to the highest German standard for joint sealant tapes DIN 18542:2009 (stress group 1) – tested for a field installation after 15 years in service! Hannoband® is available in various dimensions so you can find the right tape for your specific joint width. Each tape has a determined tolerance range, which is specified on each roll. Typical tape joint dimensions are e.g.  $\frac{1}{4}$  – $\frac{1}{2}$ " and  $\frac{3}{8}$ – $\frac{5}{8}$ ". This gives peace of mind for not perfectly even joint dimensions!

- ASTM E283, ASTM E330, ASTM E331, ASTM E547, ASTM E84 tested & certified
- For heavy-duty primary and cross joints hurricane tested based on Miami Dade wind load protocol!
- Resistant to driving rain up to 22 psf
- Tested uniform structural pressure up to 187.97 psf
- Thermal conductivity 0.285 Btu\*in/h\*ft²\*F (λ = 0.0412 W/m·K)
- Joint sound insulation value R<sub>ST,W</sub> max. 59 dB\*
- Air tightness  $a_n < 1.0$
- Extremely low VOC's: EMICODE EC1<sup>PLUS</sup> tested (< 5 TVOC [µg/m³])</li>



**Joint Sealing Tape Hannoband®-BG1**Installation Video

\* with two joint sealing tapes





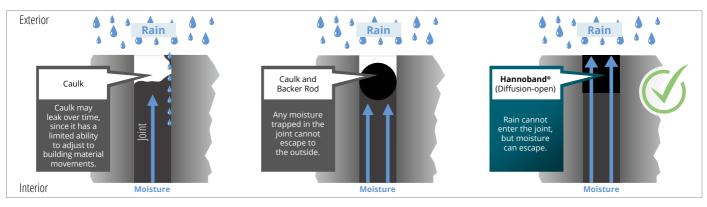
For concealed applications – cost efficient protection against draught, dust, blowing snow, moisture and noise providing excellent thermal insulation. This tape is ideal to seal even large joints up to 1 ½" and comes in various widths as from 1 ¼" mm to accommodate any construction situation.

The driving rain and air tightness performance depends on the compression rate of the foam.

- Flammability: DIN EN 13501 building material class E normal flammable material
- Thermal conductivity: λ = 0.0396 W/mK
- Temperature resistance -30 °C to +80 °C
- Extremely low VOC's: EMICODE EC1PLUS certified

Joint depth (t <sub>F</sub> )	Joint width	
	Min (b <sub>min</sub> )	Max (b <sub>max</sub> )
>1 1/4"	<sup>3</sup> / <sub>16</sub> "	1"
>1 1/4"	1/4"	1 1/4"
>1 1/4"	5/16"	1 1/2"

#### Joint Moisture Scenarios for Different Sealing Options



## Hidden Talents

#### **HANNO - The Specialist in Joint Sealing and Sound Insulation**

Hanno Werk GmbH & Co. KG, headquartered in Laatzen near Hanover, Germany, has its core competences in construction joint sealing and industrial seals, technical sound insulation for the automobile and mechanical engineering industry and also in the improvement of room acoustics and sound insulation.

The product portfolio comprises the well-recognized and proven Hannoband® to seal window and façade joints, highly effective industrial stamping parts as well as effective acoustic tiles for room acoustics.



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