

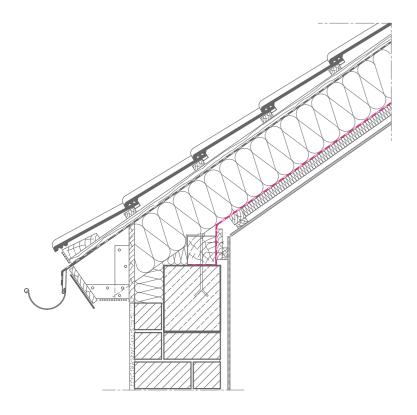
# **Airtight. Windtight.** Products for the building shell



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### Why build airtight? The second part of the building shell keeps warm and dry

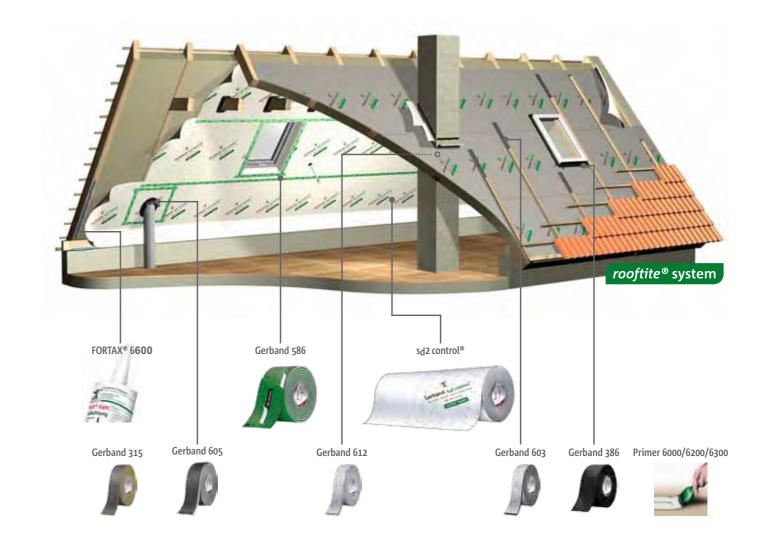


A building has to be airtight as soon as you start heating it. In general, this is being achieved with vapour barriers or innately airtight building material. Dogmata like "houses deal with moisture by breathing" are refuted long ago even though literally there is a grain of truth in that saying. Mostly, this is referred to the ability of masonries or plastered walls to regulatory hold humidity. This buffering generally only happens in the outer layers of a wall and strongly depends on the plaster. Air exchange through the wall does not occur.

Wooden roof and wall constructions have similar characteristics as masonry and plastered walls however the ability to store humidity is much higher. But the more humidity is stored, the less is the ability to insulate. There-

fore, it has to be prevented that warm and humid interior air flows outside through the wall. If air permeates through joints from the warmth to colder areas of the roof the humidity condensates excessively to water. That's the beginning of structural damage as e.g. mould formation or dry rot. In that case, the insulation becomes useless since the warmth leaves the house with the air.

It is possible to use the limited storage ability of wooden constructions but only when it is ensured that the humid air which has been hold during winter will be removed securely and fully during summer. With the following Gerband<sup>®</sup> adhesive and sealing products you are able to achieve this – all in terms of a healthy, comfortable, and nontoxic indoor climate.





FORTAX<sup>®</sup> 6600 bonds vapour barriers and films of PE, PP, and alumi-



Gerband sd2 control<sup>®</sup> is installed in the interior as vapour barrier according to DIN 4108. It meets the requirements of the Energy Saving Ordinance (EnEV) and is equally used in new construction and

# FORTAX<sup>®</sup> 6600

Adhesive sealant for dry and wet bonding

Airing time is outdated. With this solvent-free adhesive sealant based on acrylate you can either bond directly "in the wet bead" or after a short drying time on the self-adhesive sealing bead. In this way, vapour barriers are bonded on the structure conforming to the DIN 4108 code. Due to the permanent flexibility building structure movements will be reliably absorbed - long-lasting sealing is assured.

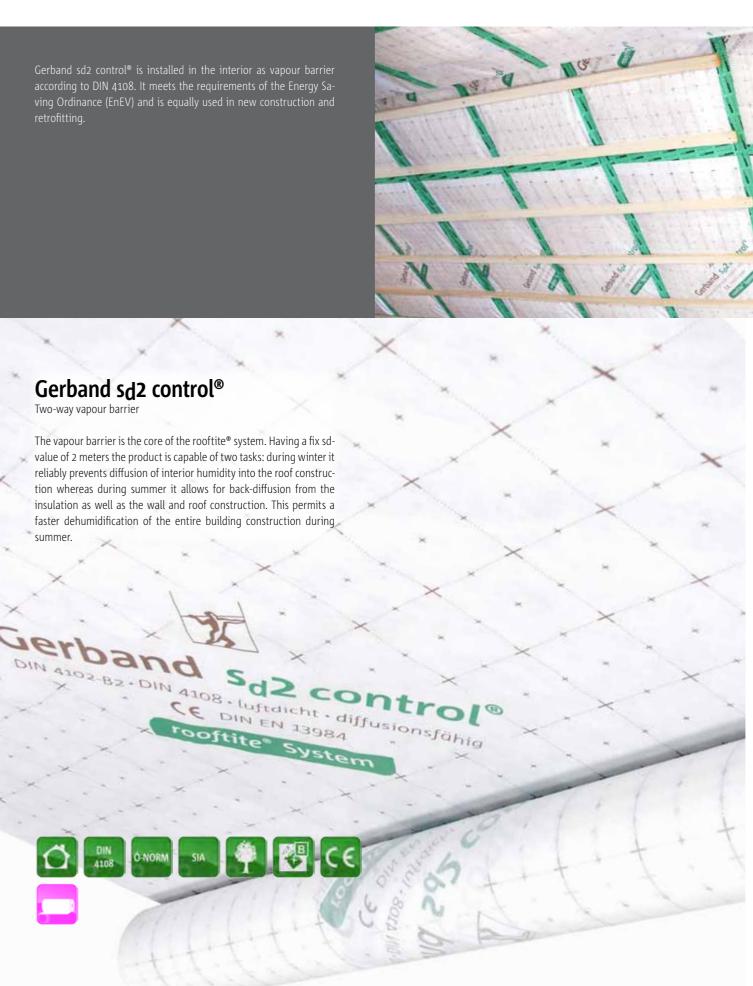
# Gerband sd2 control®

Two-way vapour barrier

The vapour barrier is the core of the rooftite<sup>®</sup> system. Having a fix sdvalue of 2 meters the product is capable of two tasks: during winter it reliably prevents diffusion of interior humidity into the roof construction whereas during summer it allows for back-diffusion from the insulation as well as the wall and roof construction. This permits a faster dehumidification of the entire building construction during cummo







Gerband 586 hermetic handles airtight bonding at overlaps and penetrations of vapour barriers according to DIN 4108 quickly, hassle-



# **Gerband 586** *hermetic*

Adhesive tape used for sealing of airtightness layers

With the PE airtightness tape Gerband 586 hermetic permanent bonded joints and overlaps are no magic. This very pliant PE-film tape with high-performance acrylic adhesive has been especially developed towards two characteristics: extremely high adhesion power and outstanding ageing resistance. Furthermore, Gerband 586 hermetic is cold resistant. A strand-woven fabric strengthens the tape and prevents possible overexpansion during application.

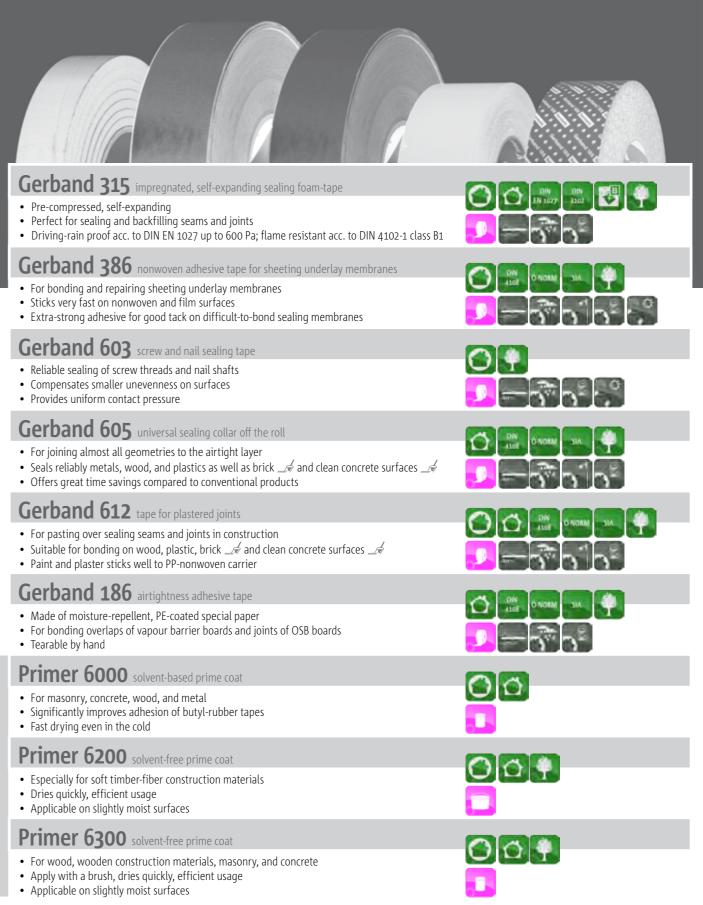


### **Preparation: primer.** Basis for strong bonding



On porous, absorbing, and dusty surfaces permanently strong bonded joints are not possible due to adhesives being surface-active. This means that sooner or later it will peel off with the loose laver from the surface. To prevent this, the surface has to be solidified and filled with a primer.

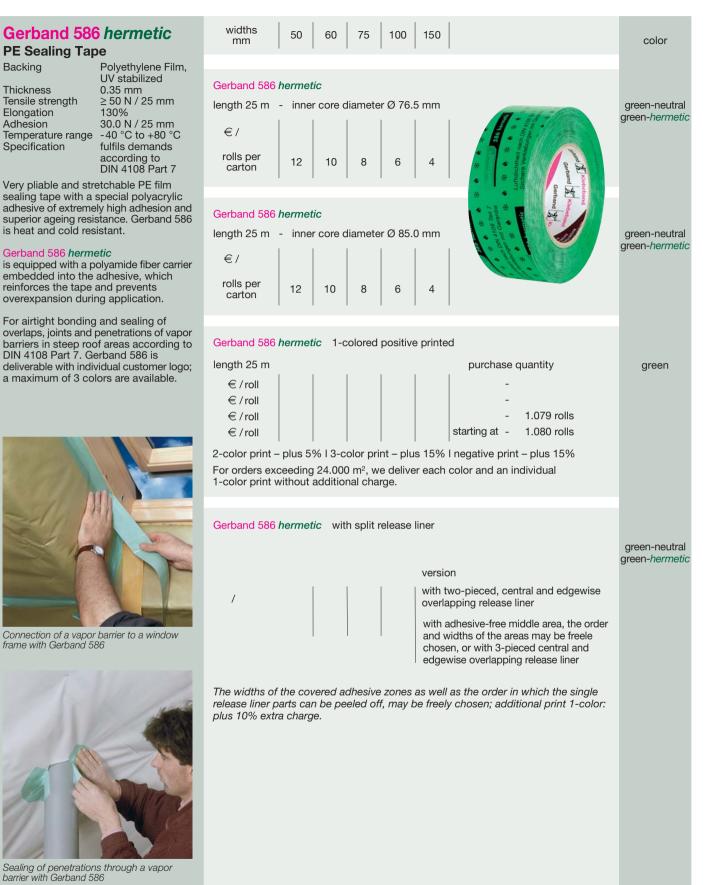
A prime coat with Gerband primers usually improves adhesive bondings, however they are not necessary for flat, closed, and clean surfaces.





# Gerband X Adhesive Tape





**Gerband 586** hermetic

### **PE Sealing Tape**

Backi

Thick

Tensi

Elong

Adhe

Temp

Spec

ing	Polye
-	UV st
iness	0.35
le strength	≥ 50
gation	130%
sion	30.0
perature range	-40 °
ification	fulfils
	acco

Very pliable and stretchable PE film sealing tape with a special polyacrylic adhesive of extremely high adhesion and superior ageing resistance. Gerband 586 is heat and cold resistant.

embedded into the adhesive, which reinforces the tape and prevents overexpansion during application.

For airtight bonding and sealing of overlaps, joints and penetrations of vapor barriers in steep roof areas according to DIN 4108 Part 7. Gerband 586 is deliverable with individual customer logo; a maximum of 3 colors are available.



Connection of a vapor barrier to a window frame with Gerband 586



Sealing of penetrations through a vapor barrier with Gerband 586

### Gerband 301 sk Diffusion-Open Sealing Film

Backing Triple-layered film /

	non-woven lamination
Color	blue
Sd value	approx. 1 m
Watertightness	specified
Plasterable	specified
	ealing foil that may be

plastered over for wind and airtight sealing of joints to windows and doors. Gerband 301 sk is flexible, tear and rip resistant, as well as waterproof. Gerband 301 sk is equipped on one side with a very strong self-adhesive tape for easy fixing onto the window.

Gerband 301 sk is used at the structural cold side, i.e. the exterior wall.

### Gerband 350 sk Diffusion-Closed Sealing Film

Backing	Triple-layered film
	non-woven
	lamination
Color	red
Sd value	approx. 50 m
Watertightness	specified
Plasterable	specified

Diffusion-open sealing film that may be plastered over for the wind and airtight sealing of joints to windows and doors. Gerband 350 sk is flexible, tear and rip resistant, as well as strongly vapor tight. Gerband 350 sk is equipped on one side with a very strong self-adhesive tape for easy fixing onto the window.

Gerband 350 sk is used at the structural warm side, i.e. the interior wall.

mm	75	100	150	200	250	300			color	
length 30 m	r.	ï		i I			ĩ		blue	
€ / roll rolls per carton	8	6	4	2	2	2				
For bonding	Gerban	d 301 sł	we rec	ommer	nd our h	igh-perfo	mance ad	hesive		

For bonding Gerband 301 sk we recommend our high-performance adhesive Gerband Fortax 6600.

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mm	75	100	150	200	250	300		color
length 40 m			r.	2				red
€ / roll								
rolls per carton	8	6	4	2	2	2		

For bonding to Gerband 350 sk we recommend our high-performance adhesive Gerband Fortax 6600.



# Windtight, waterproof, and driving rain-tight diffusion-open sealing foils in combination with vapor barriers prevent formation of condensate and mildew.

Sealing of window joint with sealing membrane Gerband 301 sk that may be plastered over for cold-side sealing and Gerband 350 sk for warm-side sealing; easy installation onto the window frame through integrated self-adhesive tapes. Sealing of the connection to the parapet with diffusion-open sealing membrane Gerband 305 sk for coldside sealing and Gerband 612, an adhesive tape that may be plastered over for warm-side sealing. Sealing of the door joint to a building frame with pressing-water-proof PE butyl-rubber tape Gerband 609 and the diffusion-tight non-woven butyl-rubber tape Gerband 612 that may be plastered over.



1. Window frame	2. Embrasure
3. PUR Foam	
4. Gerband 301 sk, diff	usion-open
5. Gerband 350 sk, diff	usion-tight
6. "sk" self-adhesive	
7. High performance ad	hesive Fortax 6600



4. Gerband 305 sk, diffusion-open 5. Gerband 612, diffusion-tight 6. "sk" self-adhesive



## Correct Sealing of Windows and Doors onto the Structural Shell-How to Avoid Structural Damage Caused by Water Condensation

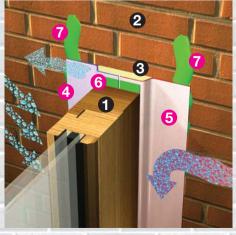
It makes sense to combine a renovation of the facade with the renewal of the windows. Nowadays we set high demands for new windows; they shall conduct very little heat to the outside and must close airtight. The critical point of windows is no longer the glass, but rather the sealing between the window frame and the embrasure. Not even the best insulating glass is of use if the window joint is not properly sealed. The window frame represents a flexible connection between the glass surface and the embrasure, which must remain sealed through all types of weather. This especially depends on the precise sealing of the joints. Due to the movement of the building components, this seal has to be accomplished with permanently flexible sealants. Detailed recommendations about the basic principles of window installation and the suitability of windows in facades may be found in the "Leitfaden zur Montage - Handbook for Installation" (RAL Gütegemeinschaft Fenster und Türen – Community Windows and Doors).

A 3-level model demonstrates the basic principles. It clearly separates the functional areas to protect joints from outside and room-side exposures:

The construction has to be airtight around the circumference (level 1). Air flow from indoors to outdoors has to be excluded. The functional areas of thermal and noise protection (level 2) must stay "dry". The area of weather protection mainly prevents the intrusion of rainwater (driving rain) from the outside. Intruded rain water has to be controlled and conducted directly to the outside. At the same time, humidity must be able to pass from the functional area to the outside. The separation of the room and outside climates (level 1) has to be executed with a higher barrier to vapor diffusion than the weather protection (level 3).

# Windtight, waterproof, and driving rain-tight diffusion-open sealing foils in combination with vapor barriers prevent formation of condensate and mildew.

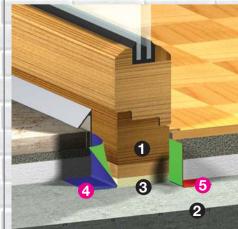
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1. Window frame2. Embrasure3. PUR Foam4. Gerband 301 sk, diffusion-open5. Gerband 350 sk, diffusion-tight6. "sk" self-adhesive7. High performance adhesive Fortax 6600



- 1. Window frame
- 2. Masonry
- 3. Insulation
- 4. Gerband 305 sk, diffusion-open
- 5. Gerband 612. diffusion-tight
- 6. "sk" self-adhesive



- 1. Door frame
- 2. Concrete
- 3. Insulation
- 4. Gerband 609, pressing-water-tight 5. Gerband 612, diffusion-tight

# Gerlinger Klebeband



Adhesives and sealants are our passion for many decades. Right from the beginning, we have been incited by the search of improvements which has significantly influenced the continuous expansion of our product range.

# Sticks since 1961.

### Traditionally reliable

With trend-setting developments, we take a leading position in the field of pressure-sensitive adhesives and we are a long-term technological partner of many well-known companies. Gerlinger products are predominantly produced at our sites in Germany.

As a family-owned company of the German "Mittelstand" we profit from short decision-making processes and fully respond to the requirements of our customers. Moreover, we research based on our own targets and visions. We develop coherent concepts, intelligent technologies, and individually tailored process solutions with a result that is consistently above the norm.

Additional information on all products is available on the respective technical data sheets. Each business is based on our sales and business conditions. You can download them from our website www. gerband.de.



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Gerlinger products are being used in endless technical and industrial areas. The requirements our products have to fulfill are extremely diverse. This means that it is necessary to check the applicability of the product for the user-specific purpose before appliance. All statements, hints, and recommendations are without engagement. Technical data is subject to change without prior notice.

All mentioned chemical, physical, and application-technical details of Gerlinger products are being made based on our own examinations and experience. All test results are averages.

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