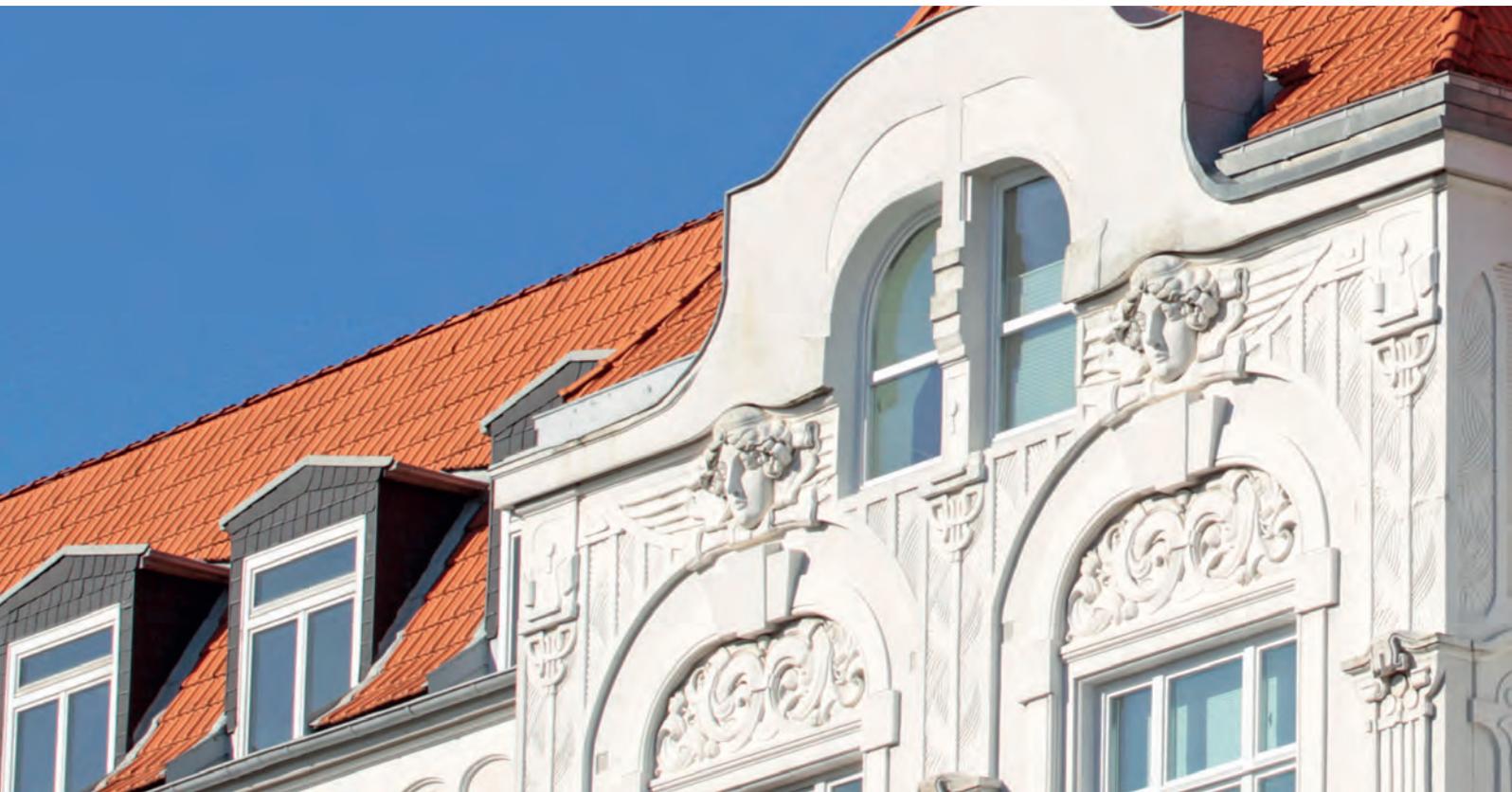


**45**  
YEARS  
PRODUCTION



ENERGY-EFFICIENT AND SUSTAINABLE:  
**SEALING SOLUTIONS FOR REFURBISHMENT**

**ISO**  
CHEMIE



## IT'S THE SEAL THAT MATTERS

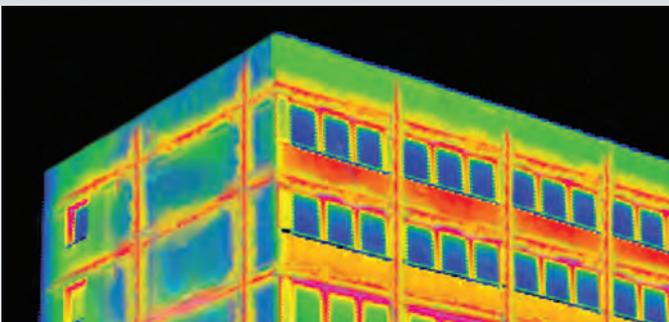
**ENERGY SAVING • CASH SAVING • VALUE INCREASING • WELLBEING • ENVIRONMENTAL CONSCIOUSNESS**

When we consider potential improvements for building renovation, we cannot ignore the subject of sealing building joints. Because this is where large amounts of warm air often get lost, a fact that is reflected in high heating bills.

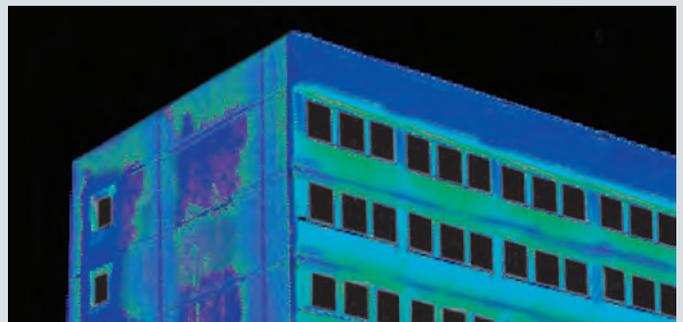
In addition to reducing energy loss, joint sealing also means ensuring increased comfort and cosiness, since a cold draft in a renovated house is not only unpleasant, it can also lead to problems with condensation and mould.

Energy related renovation in old buildings is an extensive subject, which is why there are clear regulations and guidelines for the renovation of old buildings. Only the sensible combination of all components from an energy related point of view ensures an optimum overall concept.

People are used to using modern sealing materials in new buildings. There are numerous products available. But which intelligent solutions are suitable for old buildings? The following pages provide useful information on the subject of energy related building joint renovation.



Thermal imaging **before** joint renovation



Thermal imaging **after** joint renovation



## NUMEROUS SOLUTIONS FOR ENERGY SAVING IN RENOVATION PROJECTS

### THE BUILDING ENERGY ACT

In Germany and through similar regulations in many other European countries, the Building Energy Act provides the main regulation on the subject of energy related building renovation and thus on sealing building joints.

Alongside the precise definition of U-values for components such as windows, external doors, roof and walls, the regulations include defined requirements for the renovation of buildings. According to this, buildings must be built in such a way that joints are permanently sealed air tight. Airtightness is expressed in the form of the so-called  $\alpha$ -value. The lower the  $\alpha$ -value the less energy is lost. All our sealing products comply with the Building Energy Act.

#### $\alpha$ -value

The characteristic value of the air permeability of joints is the so-called  $\alpha$ -value. This indicates the maximum amount of air per hour that may penetrate one metre of joint length. The lower the value, the less energy is lost and the more money can be saved.

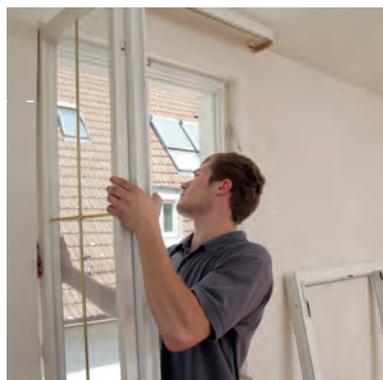
### THERMAL AND MOISTURE PROTECTION IN BUILDINGS

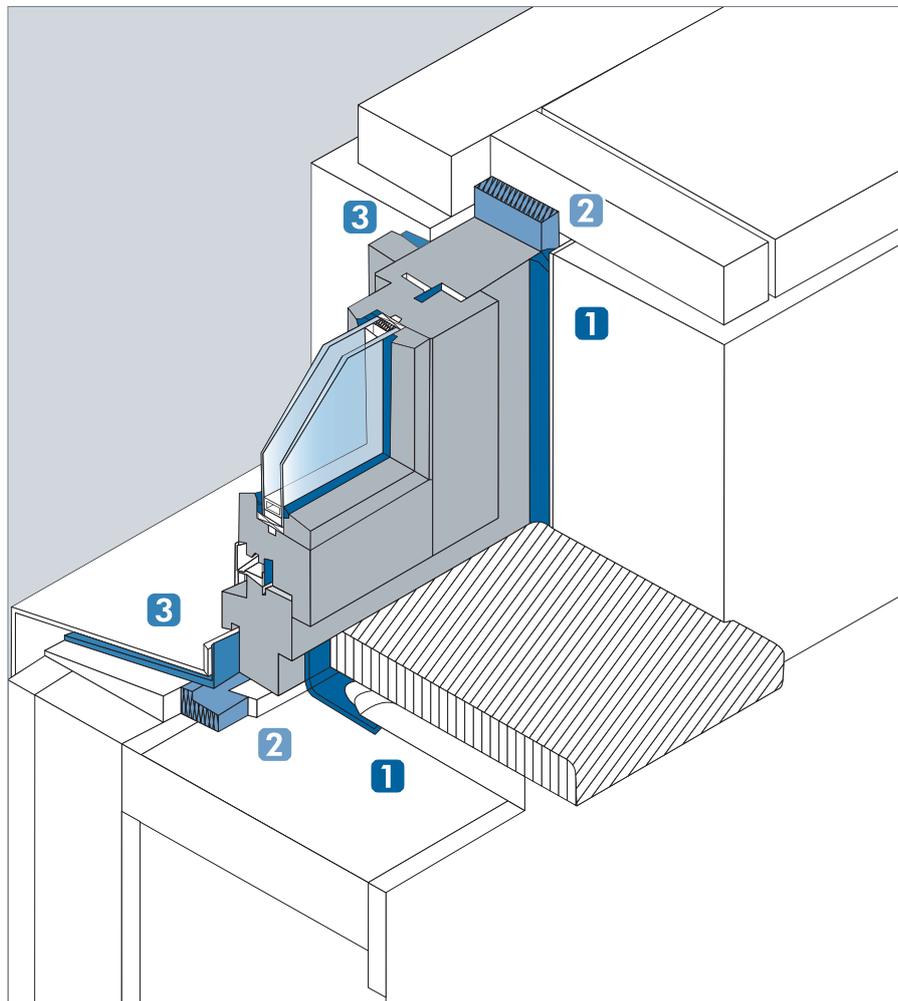
National regulations which must be considered in close connection with the Building Energy Act, indicates various installation possibilities and deals with both airtightness and humidity flow, plus the maxim "more air tight inside than out".

According to this, the joint seal on the inside should prevent humid air from the room side penetrating the joint in order to prevent condensation forming. Nevertheless, it must be guaranteed that any residual humidity in the joints can escape through the masonry to the outside.

#### $sd$ -value

The  $sd$ -value indicates how impermeable a material is against a humid air flow. The higher the value, the more impermeable the sealing material is against a humid air flow.





## 3-LEVEL PRINCIPLE OF WINDOW SEALING IN ACCORDANCE WITH RAL "INSTALLATION GUIDE"

**LEVEL 1**  
SEPARATION OF INTERNAL  
AND EXTERNAL CLIMATE

The penetration of humid room air into the structure should be stopped at this level, thus preventing the condensation of this humidity at points where surface temperatures are below the dew point. An air tight seal is fitted to prevent uncontrolled heat losses and drafts via the connection joint.

**LEVEL 2**  
FUNCTIONAL AREA

Thermal and acoustic insulation must be guaranteed at this level. The area must remain dry and must not be subject to condensation from the room side nor pelting rain from the outside.

**LEVEL 3**  
WEATHER PROTECTION

Level 3 must be designed to resist pelting rain, as a weather barrier. Wind driven rain resistance values of at least 600Pa are usually required; these are achieved or even exceeded with suitable sealing materials.





## BUILDING JOINT RENOVATION AND LISTED BUILDINGS

The renovation of listed buildings often presents planners and building companies with great challenges, because the building's appearance and historical fabric have to be preserved to a major extent. In addition to narrow frames and casement profiles, the building connection joints are usually required to remain delicate.

The difficulty is in combining the demanding legal requirements in terms of functionality, movement absorption and processing reliability with the strict specifications related to appearance and the maintenance of historical building fabric in such a way that an optimum result is obtained in all aspects.

This objective can only be achieved with careful planning and the use of products specially designed for modern renovation work.





## OUR “FILL-IN” – ISO-BLOCO FILLER

ISO-BLOCO FILLER is a multi-functional insulation and sealing system which has been developed especially for window fitting in cavity walls. For window refurbishment, it is just perfect for filling and sealing the gap between the inner wall and outer brickwork wall or rain screen.

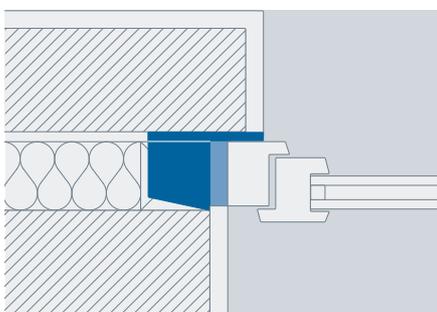
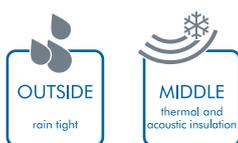
The sealing profile bars are pressed directly into the opening between the cavity walls before the window is fitted. Permanent positioning of the ISO-BLOCO FILLER is then guaranteed due to the high elasticity of the material and makes the air tight closure of the masonry opening possible, which is necessary in order to conform with window sealing standards.

The remaining joint between the window frame and the ISO-BLOCO FILLER can then be sealed according to the 3-level principle of the RAL “installation guide” e.g. using the multi-functional joint sealing tape ISO-BLOCO ONE.

ISO-BLOCO FILLER is basically made up of two functional components: One of these is a filler block made of highly elastic special foam which forms the base for sealing the window against the building and seals the gap in the cavity wall. The second component is an impregnated foam sealing bar which guarantees the sealing of the window frame against the outer wall and protects the window connection joint securely against the influence of the weather in the rebate area.

The ISO-BLOCO FILLER can be used all around the aperture. In the corners the impregnated foam is cut to form a butt joint.

PATENTED



Check reveal at the side  
(double-wall masonry)



## QUALITY CHARACTERISTICS

- simple fitting, conforming to window sealing standards in cavity walls
- ideal for “check reveal” situation
- can seal cavities with up to 30% variation
- integrated sealing tape system for sealing the weather protection level
- flexible adaptation to unevenness of the inner wall
- complies with the requirements of the Building Energy Act and the recommendations of the RAL “installation guide”

## DIMENSIONS

Type description	Format	For gaps from – to	For rebate joints up to	For rebate widths up to
ISO-BLOCO FILLER 40/60	1,000x60x60mm	40 – 60mm	6mm	45mm
ISO-BLOCO FILLER 60/80	1,000x60x80mm	60 – 80mm	6mm	45mm
ISO-BLOCO FILLER 80/100	1,000x60x100mm	80 – 100mm	6mm	45mm



## OUR "SPECIALIST" – ISO-BLOCO RENO

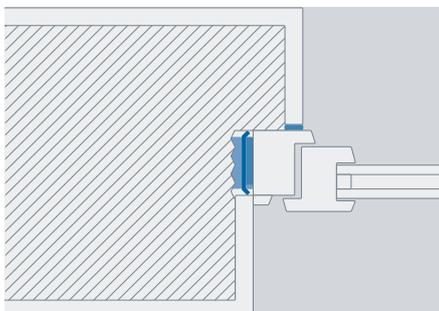
ISO-BLOCO RENO is a multi-functional sealing and insulating system specially developed for energy related window renovation. The sealing system is fitted directly into the U-recess where the old window has been removed, then it expands against the frame after the new window has been fitted, thus giving a secure seal.

The renovation system is made up of two connected sealing components. The core layer is made of high-quality polymeric material and provides a smooth surface for the seal, since it guarantees an optimum basis for sealing the connection joint, similar to the fine layer of plaster in a new building. At the same time, the cavities behind it are sealed and insulated securely. The

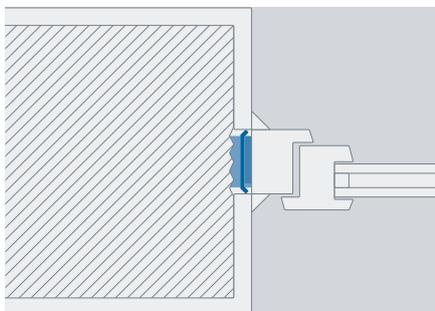
second component is a pre-compressed sealing tape with an integrated foil membrane which expands slowly against the window profile to give a reliable seal. To make fitting easier, the tape has also been made self-adhesive.

The multifunctional material has 3 distinct areas which combine to achieve the 3-level sealing required by the RAL "installation guide". On the internal side it has an  $\alpha$ -value of 0.00, which means it is 100% air tight and acts as a vapour barrier, in the middle area it ensures optimum acoustic and thermal insulation and in the outer area it provides outstanding protection from the weather with a driving rain impermeability of more than 1,000 Pa (Hurricane Forces).

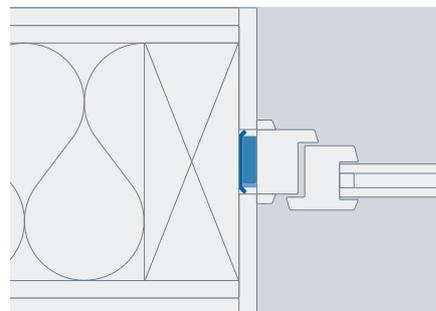




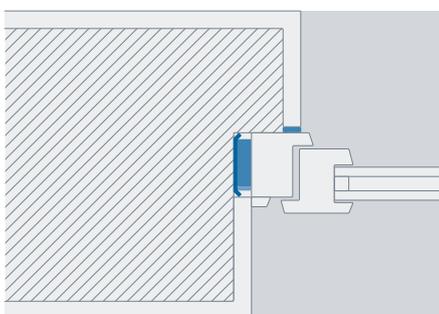
Check reveal at the side  
(monolithic masonry)



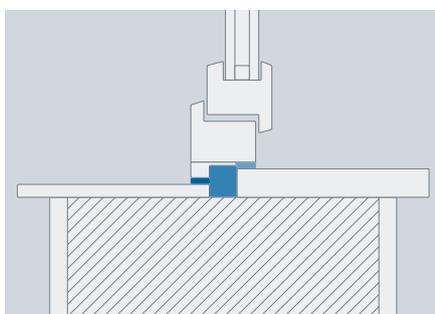
Level reveal at the side  
(monolithic masonry)



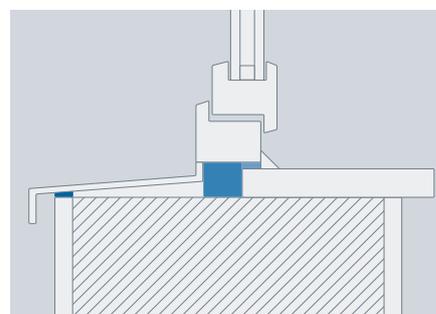
Level reveal at the side  
(timber-frame construction)



Check reveal at the side  
(monolithic masonry)



Connection at the bottom



Connection at the bottom

## QUALITY CHARACTERISTICS

- simple and reliable fitting in old buildings
- complies with the requirements of the Building Energy Act and the recommendations of the RAL "installation guide"
- 3-level seal using only one product
- MF1 -tested according to RAL requirements
- reduces convective heat loss
- clean processing without material residue
- high flexibility and application reliability even with joints of different depths
- can be combined with mastic sealing materials
- defined U-value to enable  $\Psi$ -value calculation

## DIMENSIONS

tape widths from: 75 – 105 mm  
for joint widths from: 6 – 43 mm





## OUR “MULTI-TALENT” – ISO-BLOCO ONE

ISO-BLOCO ONE is a modern multi-functional joint sealing tape which combines all 3 sealing levels in one product. The extremely low a-value of 0.00 makes the pre-compressed tape 100% air tight and vapour control on the inside. This allows convective heat losses to be reduced significantly, saving considerable amounts of heating energy. The tape has very good thermal and acoustic insulating values in the middle functional area and a driven rain resistance of more than 750Pa in the weather protection level, much higher than the standard requirement, which is 600Pa.

In addition, it has an optimum vapour diffusion gradient from the inside to the outside (40: 1) which makes the effective transportation of humidity to the outside possible, enabling joints to dry quickly. It thus complies with the RAL principle “more air tight inside than out”.

ISO-BLOCO ONE has the RAL quality mark and has MF1 classification for outer insulation and room-side sealing as required by both DIN 18542:2020 and RAL “installation guide”.

The “all-in-one tape” unites all the demands on fitting in line with Building Energy Act and RAL requirements in one single product and is especially suitable for the safe, straightforward, time and energy-saving sealing of window and door connections, as well as being very user friendly to install.







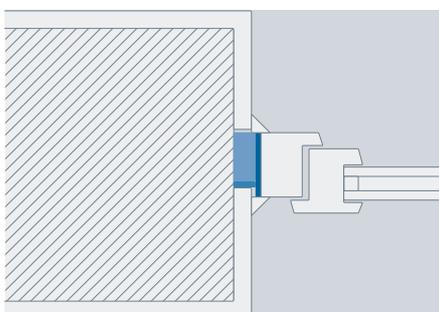
## OUR "FOREMAN" – ISO-BLOCO ONE CONTROL

The multi-functional joint sealing tape ISO-BLOCO ONE CONTROL is encapsulated with a special tear-open cover which guarantees that the tape retains its pre-compression even after the roll has been opened and pre-fitted to the window frame. In contrast to classic pre-compressed sealing tapes, expansion is only triggered after the window has been fitted. This means that the sealing tape can be pre-fitted efficiently and under controlled conditions before transport to the construction site. Window fitting can be carried out later without any rush, independently of temperature and weather conditions.

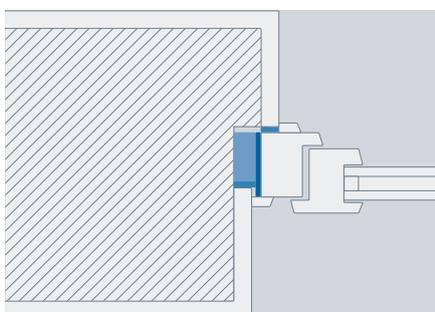
The innovative pre-fitted tape has 3 functional areas. On the outside, it has a driven rain resistance of more than 1,050 Pa for particularly good weather protection, in the middle area it ensures reliable thermal and acoustic insulation and on the inside it is 100% air tight and vapour controlling. In addition, it has an optimum vapour diffusion gradient from the inside to the outside (40 : 1). This means that any humidity that collects in the joint can dry out to the outside quickly, avoiding structural damage and mould caused by humidity.

ISO-BLOCO ONE CONTROL is suitable for all common frame materials made of PVC, aluminium and wood.

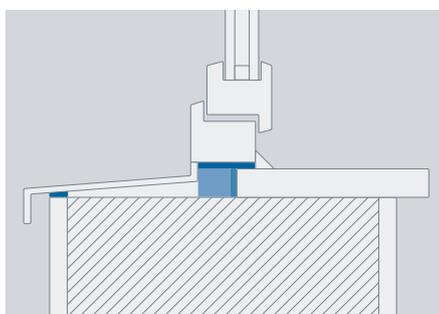




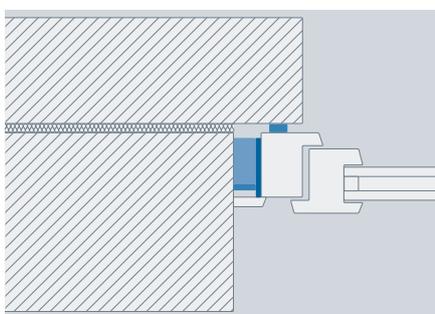
Level reveal at the side  
(monolithic masonry)



Check reveal at the side  
(monolithic masonry)



Connection at the bottom



Check reveal at the side  
(double-wall masonry)



## QUALITY CHARACTERISTICS

- cost advantage and time saving thanks to convenient pre-fitting
- precisely timed tape activation for controlled expansion
- 3-level seal using only one product in one working step
- resistant to driving rain to a minimum of 1,050 Pa
- inner airtightness reduces convective heat loss
- optimum transportation of humidity to the outside
- installation independent of temperature and the weather
- BG 1 and BGR tested according to DIN 18542:2020
- suitable for passive house construction

## DIMENSIONS

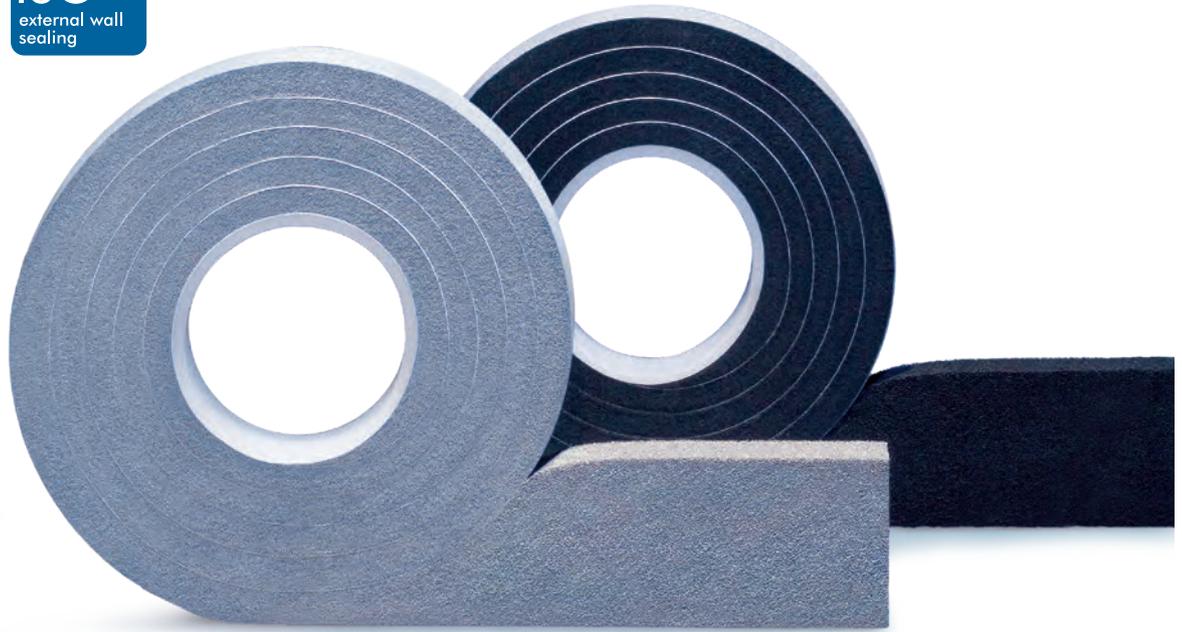
tape widths from: 60 – 94 mm  
for joint widths from: 6 – 33 mm

## FINISHES

- A: ISO-BLOCO ONE CONTROL (CB) with clip fixing
- B: ISO-BLOCO ONE CONTROL (BT) with self-adhesive butyl fixing
  - (1-BT) with one butyl adhesive strip in the middle
  - (2-BT) with two butyl adhesive strips on the outer edges

## ACCESSORIES

- ISO-TOOL CLIP for quick and easy pre-fitting on PVC and aluminium window frames
- ISO-TOOL CUT special blade for creating reliable corners



## OUR "ALL-ROUNDER" – ISO-BLOCO 600 PREMIUM EDITION

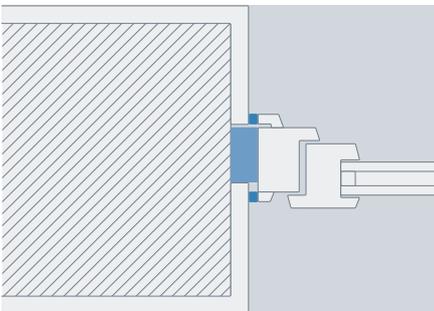
ISO-BLOCO 600 is an impregnated PUR joint sealing tape of the stress groups BG 1 and BGR. This means the tape fulfils the maximum requirements and can be used without protection in direct weather exposed areas. Providing a seal against pelting rain, wind and UV rays are the strengths of ISO-BLOCO 600. The optimum building connection situations for this all-rounder are in brick, stone or concrete block walls, as well as in timber frame constructions.

ISO-BLOCO 600 is also used for sealing conservatory structures and for dormer windows. When an EWIS is applied it seals the insulating facade to the window elements, resisting the pelting rain. ISO-BLOCO 600 can also be used indoors. When

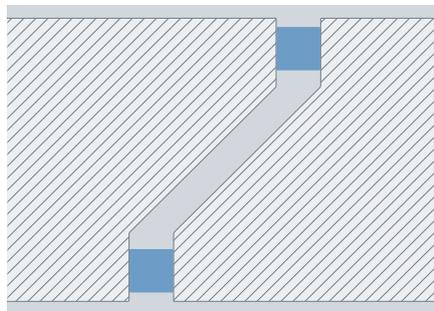
compressed slightly more than the minimum recommendation it fulfils the requirements of stress group BGR which stands for room-side sealing. In this case, the tape has an a-value of  $\leq 0.1$ , which means it even meets the requirements for airtightness for joints in passive houses.

In the past, conventional injected sealing materials often revealed that they did not provide a permanent seal in the event of joint movement, which meant the repeated renewal of the seal was necessary. ISO-BLOCO 600 can be fitted in such joints, on both new and existing buildings, providing a permanently elastic seal and good long term reliability.

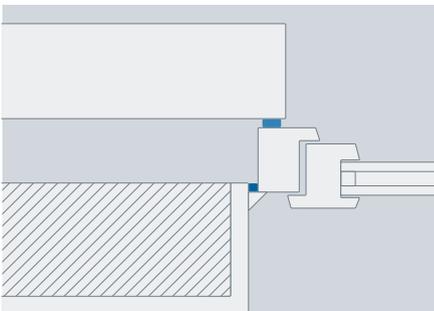




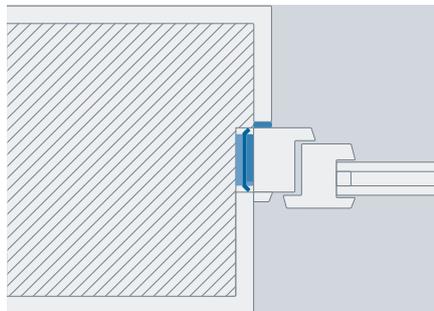
Level reveal at the side  
(monolithic masonry)



Solid wall construction joint  
(schematic layout)



Check reveal, faced with brickwork / block work



Check reveal at the side  
(monolithic masonry)



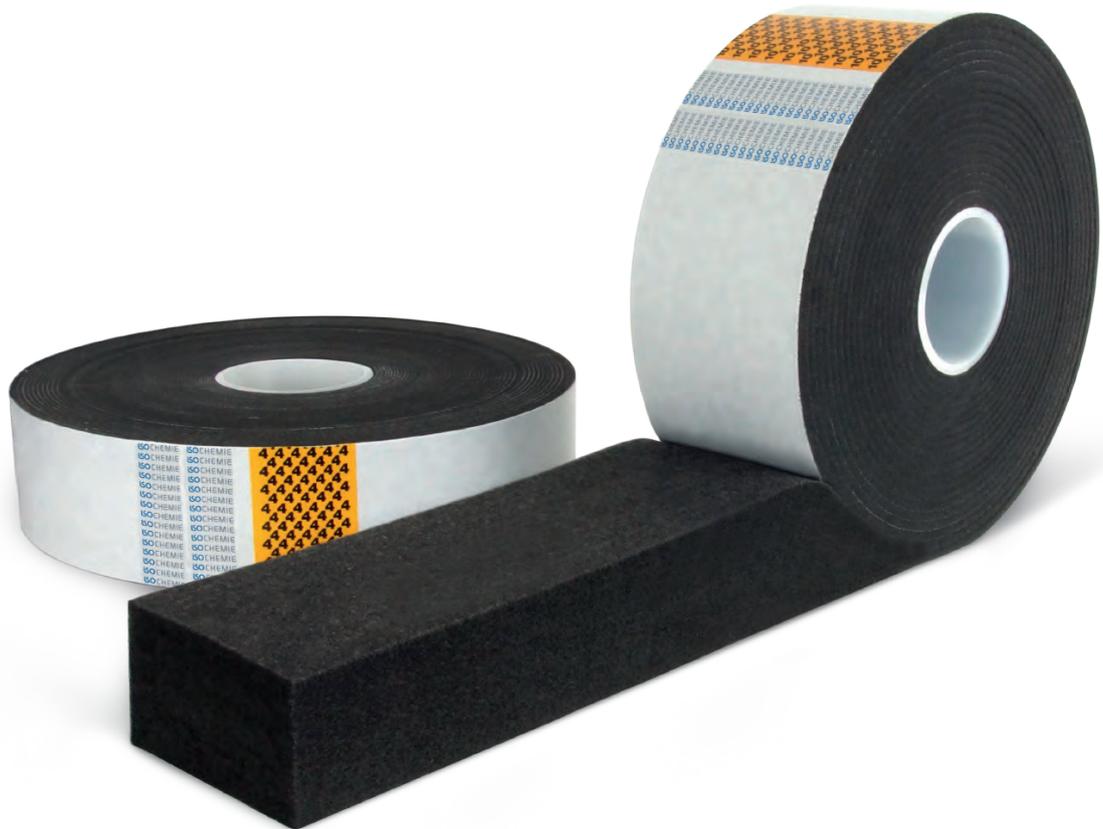
## QUALITY CHARACTERISTICS

- meets the requirements of DIN 18542:2009 BG 1 / BGR
- application security thanks to high expansion ability and wide area of application for joints
- provides permanent protection from pelting rain, drafts, wind, dust and splashwater
- open to vapour diffusion, high drying effect, promotes a healthy internal climate
- permanently elastic, with high permanent movement absorption
- acoustic and thermal insulation
- can be painted over using standard emulsion paints
- constant, DIN-conform quality regularly tested by external institutes

## DIMENSIONS

tape widths from: 8 – 50 mm  
for joint widths from: 1 – 42 mm





## OUR “INSULATOR” – ISO-BLOCO XTHERM

ISO-BLOCO XTHERM is an omni-functional sealing tape with microtherm technology. It was developed for thermal insulation that is indirectly exposed to weathering joints in windows, facades, timber constructions and roof coverings. It is especially suitable for fitting components with larger frame installations depth and especially demanding areas of application for lift-and-slide doors and roller shutter boxes, as insulation and sound insulation.

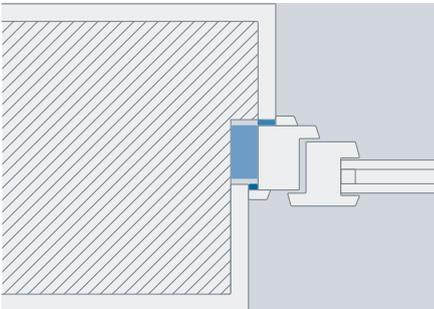
This highly thermally insulating joint tape can be covered with foils, as well as with sprayable sealants. Due to its special product properties, ISO-BLOCO XTHERM is particularly suitable for installation sites where reduced tape pressure is required. This is of great importance for lift-and-slide doors in the lintel area and also for the thermal insulation of roller shutter boxes. This means that the sealing tape also meets the special requirements in the renovation of old buildings and in the area of ceiling deflection for large, wide construction elements where a large joint insertion area is required.

In addition to extremely low thermal conductivity, ISO-BLOCO XTHERM also offers a significantly wider range of joint application than conventional thermal insulation tapes.

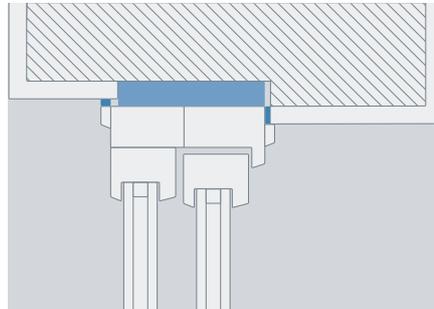
Besides the excellent technical joint parameters, ISO-BLOCO XTHERM is also free of halogens and isocyanates and therefore harmless to the health of installers and residents.

Similar to a BG2 joint sealing tape, ISO-BLOCO XTHERM has a driving rain tightness of 300 Pa in certain joint areas and meets the DIN 18542 specifications for light and weather resistance.

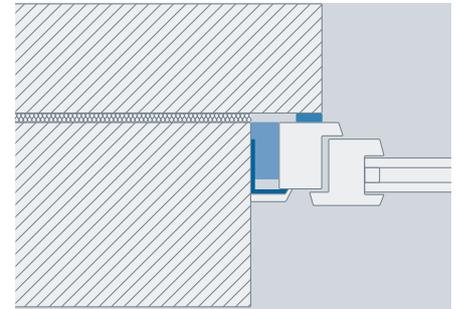




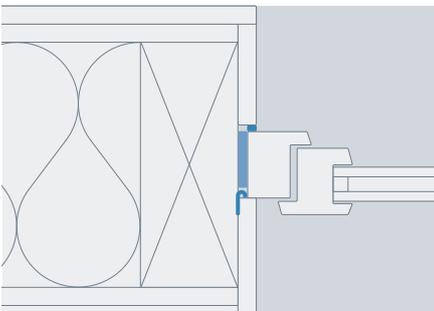
Check reveal at the side  
(monolithic masonry)



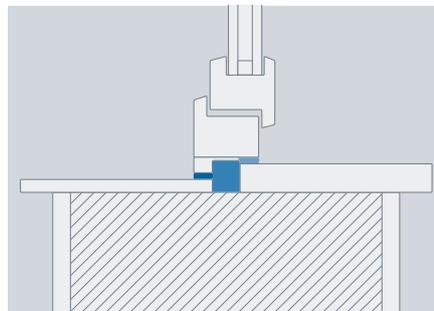
Connection at the top for lift-and-slide doors



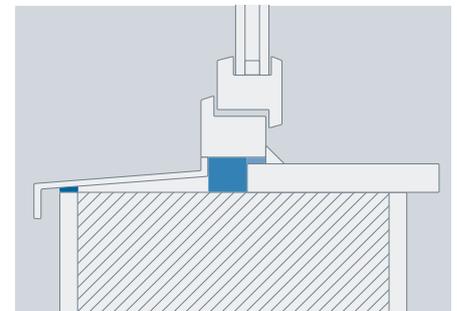
Check reveal at the side  
(double-wall masonry)



Level reveal at the side  
(timber-frame construction)



Connection at the bottom



Connection at the bottom

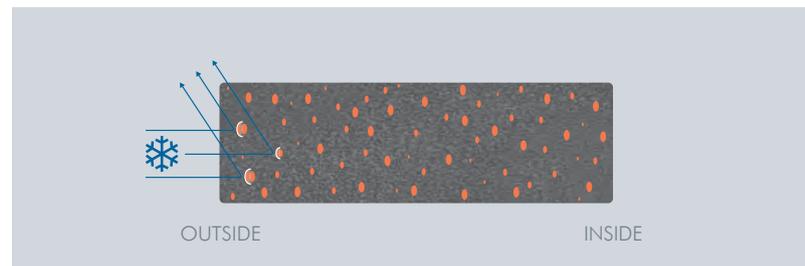
## QUALITY CHARACTERISTICS

- microtherm technology offers low thermal conductivity
- sealing a wide range of joints with only one tape dimension
- easy one step application for a reliable seal
- significant cost advantage through time saving installation during fitting
- can be installed in adverse weather conditions
- acoustic and thermal insulating
- permanently elastic with life long movement capacity
- suitable for lift-and-slide door and front doors
- low tape compression in the joint, reduced compressive stress on lift-and-slide doors in the lintel area

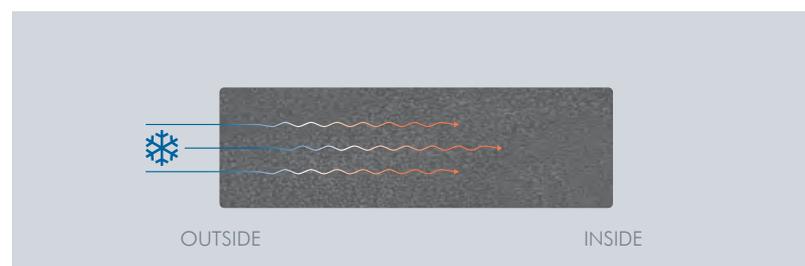
## DIMENSIONS

tape widths from: 30 – 192 mm  
for joint widths from: 4 – 60 mm

## INNOVATIVE MICROTHERM TECHNOLOGY



ISO-BLOCO XTHERM with microtherm technology



Sealing tape without microtherm technology



## OUR “ADAPTATION ARTIST” – ISO-CONNECT VARIO SD

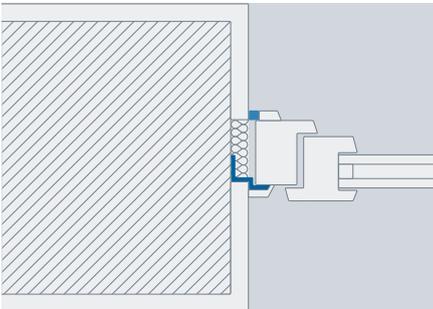
ISO-CONNECT VARIO SD is suitable both for outdoor use as weather protection and for indoor use as an air tight layer to separate internal and external climate. The special feature of this unusual window connection foil is its humidity-regulating functional mechanism which results in a high drying-out effect in the window connection joint all year round. This means that only one product is required for two applications!

The special sealing membrane allows the foil to react by varying its sd-value to the different temperature gradients between indoors to outdoors or outdoors to indoors depending on the season. Thanks

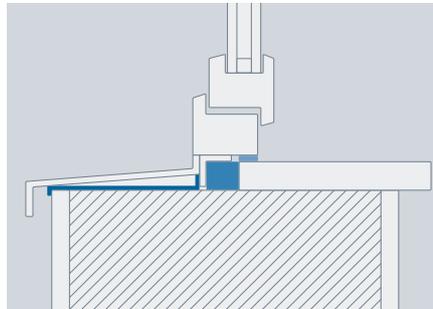
to the variable sd-value, humidity transportation from the joint to the outside works just the same as to the room side, no matter what the weather. This is important so that condensation can escape from the joint. In older building renovations in particular, the benefit of ISO-CONNECT VARIO SD foil is that any old residual moisture can still escape.

The system components of the ISO³-WINDOW SEALING SYSTEM save time and money. Thanks to their versatile use, purchasing and storage cost less, and there is no danger of mixing up foils for internal and external use.

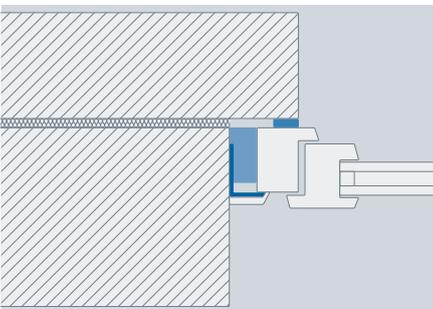




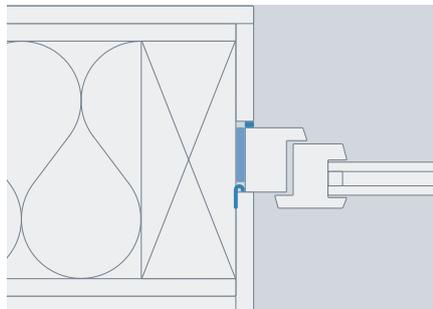
Level reveal at the side (monolithic masonry)



Connection at the bottom



Check reveal at the side (double-wall masonry)



Level reveal at the side (timber-frame construction)



## QUALITY CHARACTERISTICS

- only one product for internal and external sealing levels
- high drying effect of the joint thanks to humidity-regulating functional mechanism
- avoids fitting errors caused by mix-ups
- purchasing and storage cost less
- special fleece surface, easy to plaster and glue over
- complies with the requirements of the Building Energy Act and the recommendations of the RAL "installation guide"



### LOW SD-VALUE

= High drying effect in the joint



### HIGH SD-VALUE

= Protection from humidity penetration

## DIMENSIONS

joint widths from: 70 – 290mm



## OUR "CLASSICS" – ISO-CONNECT

### ISO-CONNECT INSIDE / OUTSIDE CX AND FD

ISO-CONNECT INSIDE / OUTSIDE CX and FD foils provide an extremely reliable building joint seal. Both the airtightness and sd-values of the building construction foils have been optimally matched. This guarantees long term functionality, even with constant component movement. The areas of application in older building renovations vary widely. The foils can be bonded to various surfaces (e.g. wood or mineral substrates, such as concrete). A reliable sealing level can be formed by connecting to vapour barrier foils. In addition, the ISO-CONNECT foils can be plastered over or covered with plasterboard or wooden trims at a later date.

#### DIMENSIONS

joint widths from: 70 – 290 mm

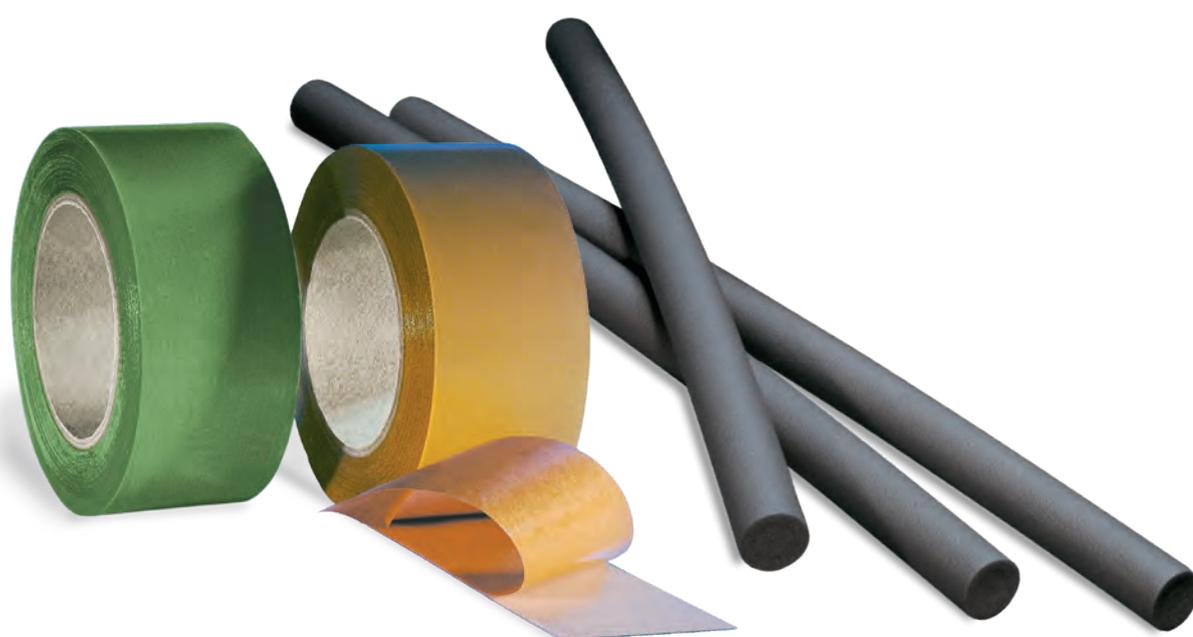
### ISO-CONNECT INSIDE / OUTSIDE EPDM

EPDM window and facade sealing film has a special task in old building renovation. It is always used wherever special loads occur.

In addition to its extreme flexibility, the outstanding property of both the INSIDE and the OUTSIDE variant is high mechanical stability and tear resistance. ISO-CONNECT OUTSIDE EPDM is mainly used for sealing against standing water in the threshold area or for parapets on the outside under the window sill.

#### DIMENSIONS

joint widths from: 100 – 500 mm



## OUR “TRIED AND TRUSTED” – ISO-TOP AND ISO-ZELL

### ISO-TOP FLEX-TAPE AND POWER-TAPE

ISO-TOP FLEX-TAPE with a high tack acrylic emulsion adhesive on one side, is flexible enough to mold around curves. The tape fits snugly to smooth surfaces, ensuring an air tight adhesive seal. It is suitable for the reliable bonding of vapour barrier foils made from film, fleece or paper and forms a secure connection between foil and surfaces such as e.g. concrete and brickwork. ISO-TOP FLEX-TAPE is also suitable for complete sealing in accordance with DIN 4108-7.

ISO-TOP POWER-TAPE is a natron kraft paper with a high tack acrylic emulsion adhesive on one side. The tape is suitable for the air tight bonding of roof insulation sheeting in accordance with DIN 4108-7.

### ISO-ZELL PE-CORD

ISO-ZELL PE-CORD is a round profile seal which fulfils the requirements of DIN 18540 for expanded joint formation. It is made of closed-cell polyethylene foam.

ISO-ZELL PE-CORD is used for the safe filling of building joints and has excellent compatibility with all standard sealing materials. When used as a backer rod for sealing compounds, 3-sided adhesion is effectively eliminated.

Thanks to its water-repellent surface structure, ISO-ZELL PE-CORD can be used as filling material on both the inside and outside. The neutral product characteristics and closed surface structure also permit use with absorbent materials.



## SEALING PRODUCTS – FOR OLD BUILDING RENOVATION

Product	Windows			Facade
	Outer seal	Thermal / Acoustic insulation	Inner seal	
ISO-BLOCO FILLER	•	•		
ISO-BLOCO RENO	•	•	•	
ISO-BLOCO ONE	•	•	•	
ISO-BLOCO ONE CONTROL	•	•	•	
ISO-BLOCO 600	•		•	•
ISO-BLOCO XTHERM		•		•
ISO-CONNECT VARIO SD	•		•	
ISO-CONNECT INSIDE FD / CX			•	
ISO-CONNECT OUTSIDE FD / CX	•			
ISO-CONNECT INSIDE EPDM			•	•
ISO-CONNECT OUTSIDE EPDM	•			•
ISO-TOP FLEX-TAPE				
ISO-TOP POWER-TAPE				
ISO-ZELL PE-CORD	•		•	

\* in tested joint dimensions.



Roof	Classification according to DIN 18542					Can be combined with sealing materials	Can be combined with cover strips	Can be combined with EWIS
	MF1	MF2	BG 1	BG 1	BG R*			
	•	•	•	•	•	•	•	•
	•		•		•	•	•	•
	•		•		•	•	•	•
•			•		•	•	•	•
•						•	•	•
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Use the blue technology.



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