

# AIRSTOP DIVA

## VAPOUR RETARDER



THE STAR AMONG THE VAPOUR RETARDER



Transparent



Tear-resistant



High sd — value spread



Favours re-drying

**ISOCELL**



With AIRSTOP DIVA ISOCELL we have developed a transparent, tear-resistant vapour barrier. The special membrane reacts to the moisture in the surrounding atmosphere. With sufficient solar insolation the moisture is transported to the interior of the construction and favourably influences the drying of construction components during the summer. A strong PP membrane guarantees very good stability.

## ADVANTAGES

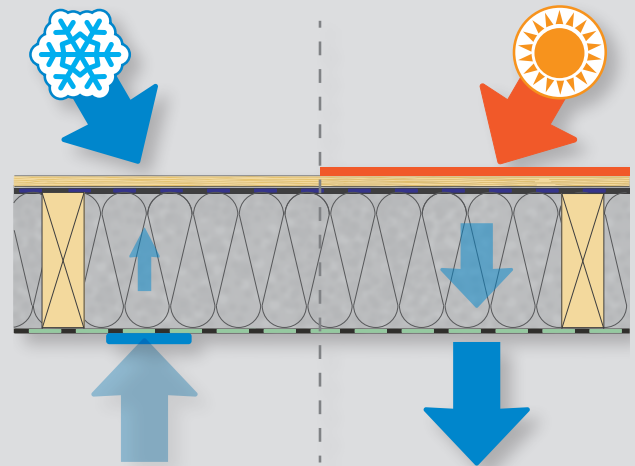
- TRANSPARENT
- MOISTURE-VARIABLE  
with a very high sd-value range
- PRINTED CUTTING LINE

## FIELD OF APPLICATION

- flat roofs
- construction components with permeable and impermeable outer shell in new constructions and refurbishment
- inside insulation for massive masonry

With AIRSTOP DIVA ISOCELL we have developed a transparent, tear-resistant vapour barrier. The special membrane reacts to the moisture in the surrounding atmosphere. With sufficient solar insolation the moisture is transported to the interior of the construction and favourably influences the drying of construction components during the summer. A strong PP membrane guarantees very good stability.

## CHALLENGING APPLICATIONS



## CONSTRUCTION ELEMENTS WITH AN AIRTIGHT SHELL

The function of a construction element depends on the structure, the climate, solar insolation, the location, the shade, use etc. In construction elements that are diffusion resistant on the exterior, drying from the room interior often ensures the hygrothermal function. The moisture and thermal characteristics of a construction element can be simulated in theory using modern software.

## TIPS FOR THE SUCCESSFUL INSTALLATION OF CHALLENGING CONSTRUCTION ELEMENTS:



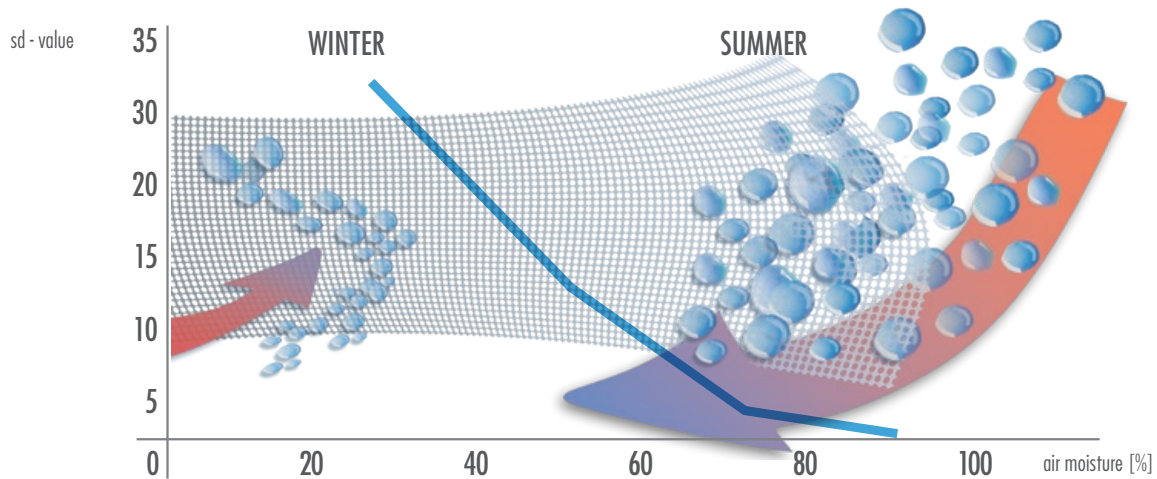
- use only dry wood
- check airtightness with the Blower Door Test
- have the function of a construction element tested in advance from a structural point of view
- observe the construction process to avoid construction moisture and flank diffusion

Elements in which drying of the insulation layer is intended to take place in the direction of the room are subject to special requirements in planning and construction. Our technical department is pleased to advise you at: [technik@isocell.at](mailto:technik@isocell.at)

# AIRSTOP DIVA

## VAPOUR RETARDER

### THE FUNCTIONAL PRINCIPLE IN WINTER - SUMMER



The functional membrane of AIRSTOP DIVA changes its resistance to diffusion depending on the current humidity. Usually room atmosphere is drier in the winter months. The sd-value of the moisture-variable vapour barrier increases. This process results in the penetration of only a little vapour into the construction and/or into the insulation. At 25 % relative room humidity the sd-value of AIRSTOP DIVA increases to > 30 m.

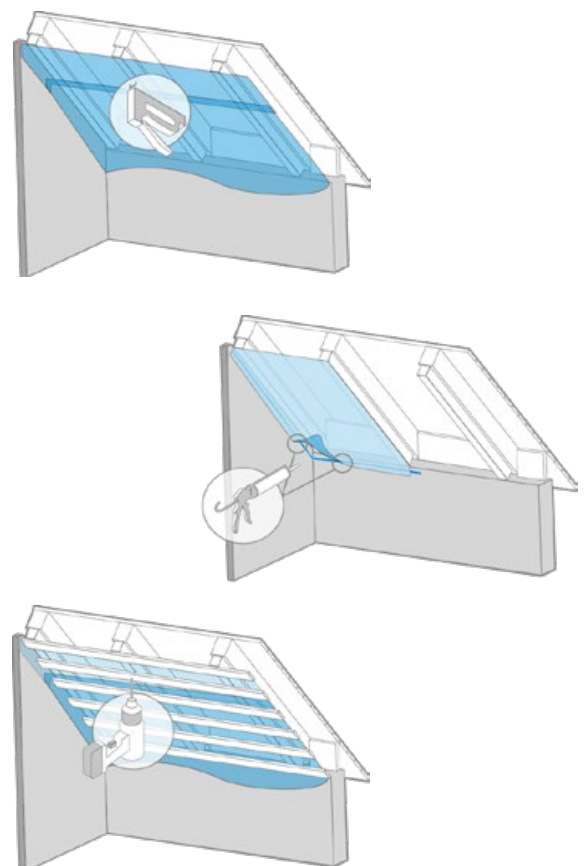
In summer the relative humidity is higher, particularly in the boundary layer between insulation and vapour barrier due to reverse diffusion. The water molecules are stored in the membrane. The sd-value sinks, causing more water vapour to escape from the construction and into the rooms, the building component becomes drier. At 70 % relative room humidity the sd-value of AIRSTOP DIVA sinks to just 2.2 m.

### LAYING INSTRUCTIONS

1. Attach AIRSTOP DIVA transverse to the position of the rafters, joists or beams with the printed, smooth side facing the installer. The strips are fixed mechanically to the construction wood using a staple gun. There should be an overlap of approx. 10 cm.
2. Adhesion of the adjoining strips, connections and penetration points must be made airtight using the AIRSTOP Adhesion System. The vapour barrier is attached to plastered brickwork, rough concrete or wood surfaces using AIRSTOP SPRINT Sealant. Penetration points such as ducts for extractors, solar or electrical equipment are sealed with the highly elastic BUTYL Stretch Flex, or sealed airtight with AIRSTOP sleeves for cables or penetrations.
3. Where blow-in insulation is to be used, the transverse lathing is mounted c-to-c < 30 cm. The transverse laths are mounted directly on the joins to relieve the adhesive joints.

### CORRECT INSTALLATION

When using vapour retarder with variable sd-values, particular attention must be paid to the construction sequence. The general rule is: first wet then dry. Tasks causing a high degree of moisture in the construction, e.g. wall and ceiling plastering, laying screed etc. must be done before the dry work processes. After evaporation of the building's moisture, installation of the vapour barrier and/or insulation can begin.



# AIRSTOP DIVA

## VAPOUR RETARDER

### PRODUCT DATA



#### AIRSTOP DIVA Vapour Retarder

#### AIRSTOP DIVA+ Vapour Retarder

Material composition

Fleece composite made of polymers

Non-woven composite made from polymers with filament reinforcement

Colour

Transparent white with blue print

Transparent with blue print

Weight ISO 536

86 g/m<sup>2</sup> (± 5 %)

110 g/m<sup>2</sup> (± 5 %)

sd-value

0,5 - 30 m

0,5 - 30 m

Temperature resistance - Standard

-40 °C - 80 °C

-40 °C - 80 °C

Expandability EN 12311-2

68 %

79 %

20 %

20 %

Tensile strength - Standard EN 12311-2

180 N / 50 mm

125 N / 50 mm

350 (± 20) N / 50 mm

315 (± 20) N / 50 mm

Tear propagation resistance - Standard EN 12310-1

140 N

150 N

350 N (-25 / +35)

375 N (-25 / +35)

Storage

kühl und trocken

kühl und trocken

### AVAILABLE IN THE FOLLOWING DIMENSIONS

Roll width

3 m    3,2 m    3,2 m

1,5 m    3 m

Roll length

100 m    100 m    40 m

50 m    50 m

### RECOMMENDED PRODUCTS



#### AIRSTOP ULTRA Adhesive Tape

Slightly malleable fabric-reinforced tape for airtight sealing indoors and outdoors. High proportion of adhesive, can be used for difficult substrates such as PP foils. Working temperature: from -5 °C



#### AIRSTOP SPRINT Sealant

Odourless, quick-drying sealant for permanent elastic sealing of gaps and joints between building components and overlaps of airtight and vapour retarders in drywall constructions e.g. around door and window installations.

Working temperature: from -5° C



**ISOCELL GmbH & Co KG**

Gewerbestraße 9 | 5202 Neumarkt am Wallersee

Tel.: +43 6216 4108-0 | Fax: +43 6216 7979

E-Mail: office@isocell.at | WWW.ISOCELL.COM

# ISOCELL