

# Vario® KM Duplex

Smart Vapour Retarder for internal applications, applied from inside and outside (renovation).

| Properties  | Performance characteristics  | Standards          |
|---|--|--------------------|
| Composition   | Polyamide-based film, Polypropylene non-woven  | -                  |
| Product designation   | Type B   | EN 13984           |
| Mass per unit area  | ca. 80 g/m <sup>2</sup>  | EN 1849-2          |
| Temperature resistance  | - 40°C up to + 80°C  | -                  |
| Dynamic diffusion equivalent air layer thickness (Sd-value)   | 0.3m ≤ sd ≤ 5m <sup>1)</sup>   | EN ISO 12572       |
| Static diffusion equivalent air layer thickness (Sd-value)    | 2 m <sup>2)</sup>  | EN 1931            |
| Durability of water vapour resistance after artificial ageing | Passed   | EN 1296<br>EN 1931 |
| Tear resistance (nail shank) – Longitudinal MD                | ≥ 50 N   | EN 12310-1         |
| Tear resistance (nail shank) – Transversal CD                 | ≥ 50 N   | EN 12310-1         |
| Tensile strength – Longitudinal MD                            | ≥ 130 N/50mm   | EN 12311-2         |
| Tensile strength – Transversal CD                             | ≥ 115 N/50mm   | EN 12311-2         |
| Elongation – Longitudinal MD                                  | ≥ 60%  | EN 12311-2         |
| Elongation – Transversal CD                                   | ≥ 60%  | EN 12311-2         |
| Fire behaviour  | Class E  | EN 13501-1         |
| UV resistance   | 1 month (< 55 MJ/m <sup>2</sup> ) – immediate coverage recommended, especially in times of high UV-load (summer) <sup>3)</sup> | -                  |
| Aroma density   | Protects from fumigation of old wood preservatives (in old buildings) in the living space                                      | -                  |

## Instructions for use

Vario® membranes ensure the airtightness continuity of the building envelope and prevent from water vapour accumulation inside the walls.

Starting from the top, install the smart vapour retarder in layers with 10 cm overlaps and fasten on the wall with staples. Seal overlaps, openings and penetrations using Vario® adhesive tapes. Use the marks printed on the membrane as a guide.

Press all the taped joints with a rubber roller. Take special care to press on the edges. Do not use a foam roller, a cambered roller or textured roller.

Before sealing the membrane to the peripheral surface, first smooth over any uneven substrate. Apply a 7 – 8 mm thick continuous bead of Vario® sealant on the surface and lay the membrane on top of this bead. Run two fingers along either side of the bead of sealant and apply slight lateral pressure to the bead. A small mound of sealant must remain underneath the membrane to create an optimum airtight seal.

In the event of blower-door testing, the membrane should be mechanically secured with metallic profiles or wooden battens.

<sup>1)</sup> The variable s<sub>d</sub>-value of Vario® membranes (in dependence of the average relative humidity of air) can only be registered by a dynamic calculation program for relevant hygrothermal simulation (e.g. WUFI® from Fraunhofer Institut für Bauphysik IBP).

<sup>2)</sup> Static Diffusion equivalent air layer thickness for calculation according to Glaser method.

<sup>3)</sup> The energy which has to be endured by the membranes in the UV-test is 55 MJ/m<sup>2</sup>. Transferred to the average global radiation in Central Europe this corresponds to 3 months UV exposure/resistance. As the UV-load can be higher depending on the season, the resistance might be shorter. We always recommend to immediately cover the membranes and due to changes in the UV-load over the year the immediate coverage is even more crucial in the summer time.

| Delivery forms |                      |              |            |           |
|----------------|----------------------|--------------|------------|-----------|
| Thickness (mm) | m <sup>2</sup> /roll | Rolls/pallet | Length (m) | Width (m) |
| ca. 0.2        | 60                   | 42           | 40         | 1.5       |
| ca. 0.2        | 30                   | 63           | 20         | 1.5       |