



hygrometry
dew point
specifications
vapour

vapour barrier





THE VAPOUR-BARRIER'S UTILITY

The difference of temperatures in winter between heated indoor areas and weather conditions creates vapour which seeps through roof layers.

Without a vapour-barrier, it reaches a particular zone called the dew point where it may take a liquid form.

This type of condensation causes:

- Stains and wet trails under the ceiling.
- From slight humidity in the insulating layers to total impregnation. This type of phenomenon results in a loss of thermal resistance and, consequently, a drop of temperature in the wall, thereby increasing the quantity of water build-up (moisture).

The purpose of this vapour-barrier is thus to prevent vapour from reaching the cold areas where the condensation process would take place. As a result it must be placed between the support member and the thermal insulating layer.

vapour barrier

Vapour barrier advantages

- Facilitates thermal insulation.
- Convenient to apply: lightweight and easy to cut out.

DESCRIPTIVE CLASSIFICATION FOR INFORMATIVE PURPOSES ONLY

Found below, is a theoretical classification of the most common types of indoor areas in terms of their use, purpose and conception according to French regulations.

1 Indoor areas exposed to slight levels of humidity.

- Offices without air-conditioning, rooms equipped with controlled mechanical ventilations and air vents adapted to the presence of vapour.
- Warehouses.
- Rooms designed and equipped for indoor sports or exercise with no public admittance, (outbuildings not being into account).

2 Indoor areas exposed to normal levels of humidity.

- School buildings with proper ventilation.
- Living areas, including kitchens and bathrooms, with proper heating and ventilation.
- Industrial manufacturing buildings whose production does not generate vapour, unless otherwise indicated in the local regulation document.
- Shopping centre.

3 Indoor areas exposed to normal but intermittent levels of humidity.

- Rooms designed and equipped for indoor sports or exercise and where spectators are admitted.
- Places of worship, community centers, buildings for cultural events. The local regulation documents specify whether the indoor area is classified as being exposed to normal or strong levels of humidity. Unless equipped with proper ventilation, they are categorised as being exposed to normal levels of humidity.

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4 Indoor areas exposed to strong levels of humidity.

- Crowded living areas with poor ventilation.
- Indoor areas with considerable amount of human activity or presence: changing rooms, certain workshops, etc.
- Air-conditioned rooms.

5 Indoor areas exposed to very high levels of humidity.

- Indoor areas designed for industrial activity and where a sensibly high level of humidity must be maintained.
- Regularly used sanitary-related areas.
- Closed areas designed for industrial activity with high levels of humidity.
- Public kitchens.
- Swimming pools.



VAPOUR-BARRIER COMPOSITION

The choice of the best-suited vapour-barrier should be made according to the nature of the support member, the hygrometry of the area and the installation method, in accordance with the French standard and with the specific technical document for waterproofing systems.

SBS MEMBRANES

Support member	Hygrometry and indoor heating	Applied with hot bitumen	Applied without hot bitumen		If cellular glass is used
MASONRY ³			^{1,2} Heavy-duty protection	² Self-protected	Without vapour-barrier ⁶ (cf insulating layer technical document)
	Typical cases	Primer + hot-applied bitumen + ELASTOPHENE 25	Primer + welded ELASTOPHENE 25 or ELASTOVAP or SOPRAVAP 3 in 1		
	Heated floors providing partial heating	Primer + hot-applied bitumen + BARAL	Primer + welded SOPRALAST 50 TV ALU or SOPRAVAP STICK ALU S 16	Primer + welded Chape ATLAS AR membrane	
	Closed areas with strong hygrometry and heated floors ensuring the whole heating system	Primer + AERISOL AR ⁴ + hot-applied bitumen + BARAL	Primer + welded AERISOL FLAM + SOPRALAST 50 TV ALU ⁴	Welded primer + AERISOL FLAM + Chape ATLAS AR membrane ⁴	

Support member	Hygrometry and indoor heating	Applied with hot bitumen	Applied without hot bitumen
WOOD	Weak and normal hygrometry	ELASTOPHENE 25 nailed onto surface, Joint either welded or sealed onto the surface ⁵	ELASTOPHENE 25 nailed onto surface.
DERIVATIVE BOARDS			Without a vapour-barrier, using joint tape.

Support member	Hygrometry and indoor heating	Applied with hot bitumen	Applied without hot bitumen		If cellular glass is used
RIBBED STEEL DECK		Ribbed steel deck	Ribbed steel deck	Damaged steel deck	Without vapour-barrier. Steel plates fastened every metre. Insulation bonded with hot-applied bitumen (cf technical notice sheet)
	Typical cases	Without vapour-barrier	Without vapour-barrier	Unrolled VAPOBAC	
	Strong hygrometry	VAPOBAC closed joints or welded ELASTOPHENE 25 or BARAL joints or bonded or in self-adhesive strips or SOPRASOLIN TAN applied on all the overlap strips+ on the fastened areas of the joints every 50 cm			
	Very strong hygrometry	Flatten the steel deck (compulsory for self-protected cases) with a 0,5 mm galvanised pre-enamelled material screwed on the deck ⁷ + hot-applied bitumen + BARAL	SOPRAVAP STICK ALU TS ⁸ or SOPRAVAP STICK ALU S 16		

1. On surfaces which are inferior to those prescribed in the technical notice sheet of the insulator, under heavy-duty protection, the vapour-barrier can be laid alone, with the same membranes, without primer. Joints must be sealed. In such a case, the **AERISOL FLAM** sublayer is not necessary. 2. The joints of the vapour barrier, without hot-applied bitumen, must be welded over 6 cm. 3. Joints must be sanded. 4. The **AERISOL FLAM** perforated diffusion layer must be unrolled edge-to-edge or with overlaps. 5. Only on boards, joints must be sanded (cf technical notice sheet). 6. Except in mountainous climates: 7. The protective quality of the steel plates must be determined only after consulting and obtaining the manufacturer's approval. 8. Refer to the relevant documentation.

APP MEMBRANES, please contact us.



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