INSTALLATION INSTRUCTION 13, FOR APPLICATION OF VAPOUR PERMEABLE MEMBRANES AS WIND-INSULATION IN CONSTRUCTION WALLS.

This instruction concerns the most important regulations of installation of vapour-permeable membranes further referred to as “ICM” with DoP type 90 – type 165 in function of wind-insulation, a protective material applied in partition walls. There are other possible installation methods, justified by the type of construction or requirements the building has to meet.

ICM as wind-insulation is applied generally:

1) in outer construction walls with skeletal structure: wooden or steel, insulated with mineral or wooden wool placed between construction elements;

2) by thermal insulation of walls in old and new buildings using so-called dry method (insulation on a grid);

3) on a sheathing of walls made of wood-based materials (e.g. OSB boards)

In all those constructions ICM is intended to be applied on their outer side (pic. 1) under façade on the whole surface of the wall.

By such application of ICM, the following requirements must be met:

1. No matter of the construction or type, facades must be ventilated. The materials used for facades most frequently are: clinker or silicate brick wall, boards, concrete, ceramic, plastic and wooden facings, metal coffers and profiled metal sheets.
2. ICM must be installed under ventilated façade, i.e. between façade and wind-insulation there must be a distance of minimum 2 cm and ventilation gap created in this way must have inlet on the bottom and outlet on the top of the wall.
3. Anchoring system of facade facings must ensure tightness of the wind-insulation layer created by ICM.
4. Basic condition for correct functioning of ICM is installation of vapour-insulation from the inner side of protected skeletal walls.
5. ICM can be installed on a sheathing made of boards or directly on thermal insulation – grey side facing inwards and overprint outwards.
6. ICM is initially fixed by means of staples or nails directly to the wooden beams of the construction and then pressed by means of laths mounted vertically (due to the airflow).
7. In case of metal constructions, initial fixing of ICM should be made with help of double-sided adhesive tapes (MARMA N2) or glues and the fundamental fixing is ensured by façade fixing system (by pressing to the construction).
8. Both on wooden and on metal constructions, ICM can be installed parallelly or perpendicularly to foundations with strips connected with overlaps with width of 15 cm (pic. 2) marked on outer nonwoven with dotted line.
9. If there is a need to perform smaller overlaps, they should be taped with adhesive tapes (pic. 2) – minimal taped overlap is 5 cm.
10. In case of connecting strips in one row, the overlap should be taped by means of adhesive tapes (pic. 2) and the place of connection should be chosen so that it is laid on rigid ground.
11. Under the eaves and by foundations, ICM should be installed tightly, so that the connection with these elements does not have any gaps or holes showing thermal insulation or that it creates a clearance to the inside of the building; these connections should be sealed with MARMA SB2 tape or appropriate glues.
12. Not covered places should be filled by taping them with adhesive tape (MARMA W1).
13. In places where holes for windows, doors, ventilators and any others should be made, ICM should be cut diagonally and the loose fragments should be curled inside and fixed with staples or adhesive tapes (pic. 2) on the inner side of the walls and the clearances should be filled and taped.
14. Passages of different installations standing out of the wall should be taped around by means of adhesive tape (MARMA W1).
15. Places of accidental damage should be repaired by using adhesive tapes or glues strictly intended for this purpose.



REMARKS

1. The level of airtightness of the construction depends on sealing of many different elements of this construction. The method provided in this instruction ensures only protection from drafting of thermal insulation and wall construction. Full airtightness of the construction demands tight sealing of wall wind-insulation with foundations, windows, etc. and with roof construction (it is very important). In many constructions, the easiest way to obtain airtightness is by tight installation of vapour-insulation layer. The best effects are obtained by tight and careful installation of wind-insulation outside and vapour-insulation inside the construction.

2. Because of the influence of ultraviolet radiation (UV) included in sunlight on ICM, it is advised to install façade as soon as possible after its installation, and not later than 2 months from the date of installation of ICM on the wall.

3. We ask the performers of installation of the ICM to observe fire safety conditions, including not smoking during the installation.

4. We warn from application of salt impregnates for protection of wooden laths – they can damage active layer of ICM and all metal accessories, including nails, screws and fixing staples.

5. By thermal insulating of old and new wooden or brick walls by means of dry method, regardless of the type of thermal insulation (wool or Styrofoam), ICM should be installed on the outer side of thermal insulation.

6. In skeletal and wooden constructions it should be taken into consideration that the high vapour-permeability of **ICM** can cause dampness in the lower (often cold) parts of the walls located on the north side of the construction.

7. **ICM with DoP type 90 – type 120** (thin) should be distanced from façade with accordingly bigger number of laths and other inserts (e.g. from EPS), so that the flexibility and weight of the wool do not cause excessive pushing of **ICM** to the façade. It threatens with clogging of the ventilation gap.



**Instruction written according to the state of knowledge from May 2019.**

Additional information on websites:

[www.marma.com.pl](http://www.marma.com.pl) and [www.dachowa.com.pl](http://www.dachowa.com.pl) .