

MEMBRANMATERIAL VALMEX® MEHATOP F IN COMPARISON WITH OTHER MATERIALS

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VALMEX® MEHATOP F is a multi-layer coated polyester fabric. (see graph A)

VALMEX® MEHATOP F has its place within the family of membrane materials. This paper will explain how prominent its place is.

Most membranes are manufactured from either
GLASS/PTFE or PES/PVC

Glass /PTFE is well known for its long lasting good performances as: good weathering resistance, high light-translucency, high rating in fire tests.

Architects, contractors who go for glass/PTFE make a good choice. They take under consideration, that glass/PTFE

- is an expensive material
- needs expensive manufacturing equipment
- has high manufacturing costs
- has high costs for engineering and testing

Not all projects need the high level of performance of glass/PTFE. There are projects which can be done more economically with PES/PVC. There are projects which even cannot be realised with glass/PTFE because the material is stiff and has little crack-resistance.

So PES/PVC can be a good choice as well. There are many examples of successful projects.

PES/PVC is very flexible, is easy to manufacture, has low costs for material, engineering and testing.

PES/PVC needs a top coat, in order to have good refining properties.

(Graph B shows the results of a decontamination test, done at the German Nuclear Research Centre, Jülich)

The industry is offering the following solutions:

- The "top coat" is not a coat, but a laminated foil
- The top coat is a "100%" PVDF lacquer
- The top coat is an acrylic lacquer (VALMEX® MEHATOP A)
- The top coat is a weldable PVDF lacquer (VALMEX® MEHATOP F)

Solution 1- needs a grinding treatment before welding a seam.

Solution 1- inherits the chance of de-lamination.

Solution 2- needs a grinding treatment before welding a seam.

Solution 3- is weldable without pre-treatment.

Solution 4- is weldable without pre-treatment with increased refining properties.

All top coat solutions have in common: They are stiffer as the layers underneath. Thin top coat layers are better than thick ones. Thick layers inherit the chance of cracking or de-lamination.

The speciality of **VALMEX® MEHATOP F** is, that the PVDF is modified by Mehler Haku internally and that it is applied with a 2-layer system both sides.

This modified PVDF lacquer made his successful entrance to the market already 1995. Millions of square meters are actually in use in different strength categories.

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