

Frequently Asked Questions

3. What consideration should we allow for the membrane material service life?

Properly designed permanent construction can yield above 20 year lifespan, which is highly dependant on the design, the quality of material used, what the building is used for, the maintenance grade applied during the project life and the environmental conditions of the location of the installed project.

Permanent structures will obviously last longer than non-permanent structures and the longevity of non-permanent structures is predominantly dependant on the maintenance, the utilization intensity, and the erection and dismantling methods.

Our materials undergo intense internal testing along the complete production process and fulfil most of the commonly used quality test methods.



A great example of longevity would be the Grand Stand Open-air Theatre in Elspe, Germany. Completed in 1978, this structure is one of the most advanced and spectacular tensile structures to this day, delighting visitors with its imposing steel members sustaining the membrane roof and suspending it over 2.000m² space. The project, designed by the engineering company Naumann Et Dollansky, has protected approx. 4.500 persons daily from possible adverse conditions during the daily programmed shows since then. The 25m higher masts are suspending the membrane roof so that a 100m area could remain free of any obstacle.

The structure, due to permanent exposure to typical German climatic

condition and in particular higher wind and snow loads, is actually one of the most evident examples of properties longevity for our materials. The material used is a Mehler Technologies Type IV PVC-PES coated fabric. The residual mechanical resistance (tensile strength) when measured in year 2007 was 95% of the initial value. This has to be considered an excellent performance due to several preconditions, good performing engineering, quality membrane material, execution and maintenance tasks.

Up to date, there is no request to replace the fabric. The membrane covering remains a safe and attractive eye-catch structure for all who are visiting the park.



Living example of longevity: The grand stand of the open-air theatre in Elspe (D), realized in 1978 with Type IV PVC-coated membrane by Mehler Technologies.

4. Amazing, but... how can you ensure that your materials are resistant to external agents?

Mehler Technologies materials for architecture are designed to resist environmental factors and general external agent influences. Projects located in areas which have extremely high UV exposure require materials with high UV stabilization substances.

The UV stabilization substances absorb the UV rays and protect the colour pigments against bleaching. It is true that after a period of time, depending on the UV intensity grade, the plasticizer components start to migrate, which results in the PVC coating becoming stiffer. This results in change of colour intensity under certain circumstances and this helps us to recognize projects whereby regular maintenance was not carried

out. The special surface lacquering system "MEHATOP F" provides additional protection against infestation by fungus and micro organisms. Our architecture materials are generally guaranteed for 10 years from production date which is dependant on the project characteristics, the end use design, the material type and the guarantee is extendable to longer period of time which is dependant on other circumstances of the project.