

Case Study

Project/customer name:	Roof with solar cells
Year of application:	2009
Location/country:	Stadthagen / Germany
Building type:	Commercial building
Authorized contractor:	Ahrens Solartechnik GmbH & Co. KG
Additional project details:	Requirement of high dynamic crack bridging

General view:



Challenge:

- One megawatt nominal output is achieved on the 25,000 square meter roof area, which is equipped with Kyocera high-performance solar cells.
- The task was a fast and permanent waterproofing of roof penetrations.
- A strong resilience despite the extreme weight of 600 steel supports was required.
- It had to be a flexible solution, even under strong movements and therefore required high dynamic crack bridging.



Solution:

- The solution was a fleece-reinforced seal with Triflex ProDetail.
- This system is highly elastic and guarantees high and dynamic crack-bridging.
- Due to the fast curing time (30 min) of the PMMA based solution, the works could be completed by meeting all deadlines.

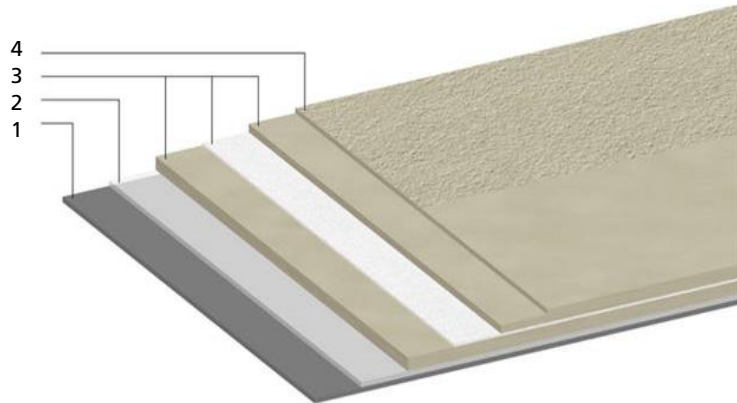


Products used at a glance:

Triflex offers liquid PMMA* based resins (e.g. ProDetail for details or ProTect for areas):

1. Substrate
2. Primer, if necessary
3. Waterproofing layers
 - a) Triflex ProDetail (2kg / sqm)
 - b) Triflex Special Fleece
 - c) Triflex ProDetail (1 kg / sqm)
4. Finish, if wanted

* Polymethyl methacrylate



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Main benefits (European Guideline ETAG 005):

- 25 years estimated working life performance
- Fast curing time and rainproof after only 30 minutes
- Application possible till humidity of 99% and withstands surface temperature after application up to 90° C
- A liquid seamless solution that fits to any structure with complex geometry
- Adherence to any surfaces (Aluminum, steel, plastic, glass, bitumen, concrete, ...)
- Solvent free, environmental friendly and with no risk to health
- High resistance to chemicals, roots and rhizome, alkali and hydrolysis
- Cold application with no flame and flame retardant
- Highly UV resistant (1000 MJ/m² = 325 days)
- Easy to impose loads after application (for particular demands as green roofs)