

Planning documents

Roof surface reflective waterproofing system

# Triflex ProSolar





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## Applications



**Triflex ProSolar** is a white coating system which significantly improves the efficiency of photovoltaic systems installed on it. The system can be used on existing, functional waterproofing as well as on new waterproofing (e.g. with Triflex ProTect).

The performance of the photovoltaic system play an important role, in particular for the client's investment planning. The higher the performance, the more quickly the investment pays off and the build is amortised. With the black bitumen and polymer bitumen sheeting in particular, the performance effect has a particularly quick impact.

### Increased effectiveness of photovoltaic systems

Photovoltaic systems are an attractive market for private and commercial space. The systems are often installed on existing roof surfaces. Here, the efficiency and thus the effectiveness of the photovoltaic system can be increased with the help of Triflex ProSolar. The light colour of the system increases the degree of reflection and lowers the surface temperature. Both have a positive effect on the performance of the photovoltaic system.



## Advantages at a glance

### Ideal for refurbishments

The system can be applied to virtually all substrates and, with mass per unit area of less than 1 kg/m<sup>2</sup>, it is also suitable for application on old waterproofing coverings without negatively affecting stability. This saves removal costs and time.

### Short curing times

The liquid-applied system has particularly rapid curing times. It is fully functional after only an hour. This ensures reliable processing – even in changeable weather and at substrate temperatures of down to 0 °C.

### Easy to maintain

Triflex ProSolar has excellent mechanical and chemical stability. The system can be walked on normally and requires no further overlays as surface protection. It also fully bonds to the substrate preventing the underflow of rainwater. This means that any leakages are easy to locate and repair.

### Return on Investment (ROI)

The white Triflex ProSolar surface is considerably more reflective than conventional roof sheeting. This results in a major increase in the performance of photovoltaic systems and, in turn, shorter payback periods.

### Thermal protection

Thanks to the bright surface, with its SRI value of 97, the roof surface heats up less. As a result, the climate in the rooms below is cooler and more pleasant. Electricity consumption by air-conditioning systems can be reduced.

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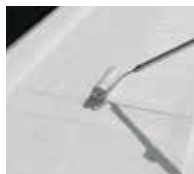
And this is how it's done...



1. The bitumen sheeting is primed with Triflex Ceryl Primer 222.



2. All details and junctions are waterproofed with Triflex ProDetail.



3. The Triflex ProTect (white) surface resin is laid ...



4. ... reinforced with Triflex Special Fleece ...



5. ... and laid wet-on-wet with a top layer of Triflex ProTect (white).



6. Triflex ProSolar Finish is used to seal the surface.



7. The white surface optimises the energy yield.



## Compatible system components

All the Triflex products mentioned in this system are carefully coordinated on the basis of laboratory testing and years of experience. This standard of quality ensures optimum results during both application and use.



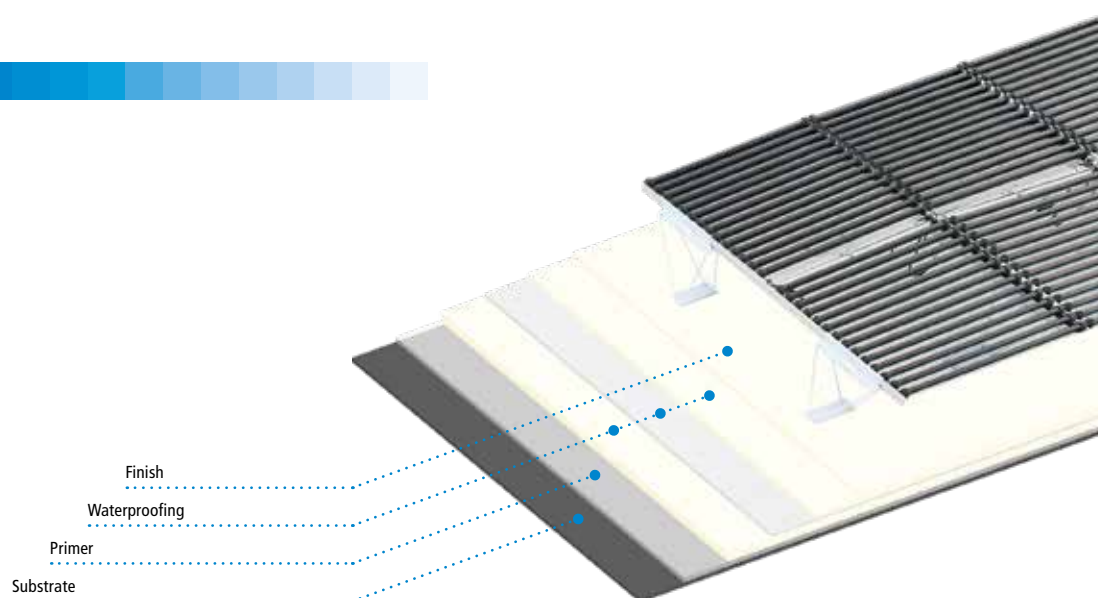
# Triflex ProSolar

## System description

### Properties

- Fully reinforced waterproofing system with a polymethyl methacrylate (PMMA) base
- Hydrolysis-resistant
- Seamless
- Cold-applied
- Fast-curing
- Flexible in low temperatures
- Excellent adhesion properties on a multitude of substrates
- Root-resistant in line with FLL
- Can be used at substrate temperatures of down to 0 °C
- Extremely weather-resistant (UV, IR, etc.)
- Radon-resistant
- Suitable for normal pedestrian traffic
- Elastic and crack-bridging
- Solar Reflectance Index SRI = 97
- Resistant to chemicals present in air and rainwater
- Resistant to external fire exposure to DIN 4102/DIN EN 13501
- Hard roofing in accordance with the German regional building regulations
- European Technical Approval with CE mark in the highest usage categories (W3, M and S, P1 to P4, S1 to S4, TL4, TH4)
- Meets the requirements of DIN 18531 and the German Flat Roof Guidelines
- General Building Supervisory Authority Test Certificate (abP) for liquid-applied waterproofing of building structures set out in PG-FLK according to VV TB No. C 3.28

### System build-up



### System components

#### Primer

Triflex Primer for sealing the substrate and ensuring substrate adhesion (if necessary, see Substrate pre-treatment table).

#### Waterproofing

Triflex ProTect waterproof membrane (optionally in colour 9010 (white)), fully reinforced with a sturdy Triflex special polyester fleece.

#### Finish

Triflex ProSolar Finish for increasing the reflection factor.

### Substrate

The suitability of the specific substrate should always be tested on a case-by-case basis. The substrate must be clean, dry and free of cement bloom, dust, oil, grease and other adhesion-inhibiting substances.

**Moisture:** When carrying out waterproofing work, the substrate moisture must not exceed 6 % by weight. Ensure that structural measures are taken to prevent moisture penetration of the coating from underneath.

**Dew point:** During application, the surface temperature must be at least 3 °C above the dew point temperature. Below this temperature, a separating film of moisture can form on the surface.

**Hardness:** Mineral substrates must be permitted to fully harden for at least 28 days.

**Adhesion:** The following tensile strengths must be verified on pretreated test surfaces:

Concrete: at least 1.5 N/mm<sup>2</sup> on average, and no single value below 1.0 N/mm<sup>2</sup>.





## System description

### Substrate pre-treatment

Substrate	Pre-treatment	Primer
Aluminium	Abrade with Triflex Cleaner	Triflex Metal Primer <sup>(B)</sup>
Cold bitumen coating	Adhesive strength test	Triflex Cryl Primer 222
Copper	Abrade with Triflex Cleaner	Triflex Metal Primer <sup>(B)</sup>
FRP/skylight frame	Abrade with Triflex Cleaner, roughen surface	No primer
Hot bitumen coating	Adhesive strength test	Triflex Cryl Primer 222
Paint	Completely grind off	See substrate
Plastic sheeting (PIB)	Roughen surface, adhesive strength test	On request <sup>(A)</sup>
Plastic sheeting (PVC-P, nB), EVA	Abrade with Triflex Cleaner	No primer
Plastic sheeting (TPO, FPO, EPDM)	Abrade with Triflex Cleaner, roughen surface, adhesive strength test mandatory	On request <sup>(A)</sup>
Polymer bitumen sheeting (PYE) mod. (SBS)	Remove any loose material	No primer
Polymer bitumen sheeting (PYP) mod. (APP)	Remove any loose material, adhesive strength test	Triflex Cryl Primer 222
PVC mouldings, rigid	Abrade with Triflex Cleaner, roughen surface	No primer
Stainless steel	Abrade with Triflex Cleaner	Triflex Metal Primer <sup>(B)</sup>
Steel, galvanised	Abrade with Triflex Cleaner	Triflex Metal Primer <sup>(B)</sup>
Zinc	Abrade with Triflex Cleaner	Triflex Metal Primer <sup>(B)</sup>

<sup>(A)</sup> Depending on the type of sheeting, e.g. using Triflex Primer 610.

<sup>(B)</sup> Alternative to priming: Abrade with Triflex Cleaner and roughen surface.

Information on other substrates is available on request (technik@triflex.de).

#### Important:

Adhesion must always be tested on the specific substrate!

### Priming

#### Triflex Cryl Primer 222

Apply evenly and cross-coat using a Triflex Universal Roller.

Consumption: at least 0.40 kg/m<sup>2</sup>.

Can be recoated after approx. 45 mins.

#### Triflex Metal Primer

Apply a film with a short-pile roller (e.g. MP roller) or alternatively, apply a film with a spray can.

Consumption: approx. 0.15 l/m<sup>2</sup>.

Can be recoated after approx. 60 mins.

#### Triflex Primer 610

Apply evenly with a brush or roller.

Consumption: approx. 0.04–0.08 kg/m<sup>2</sup>

Can be recoated after approx. 20 mins.

### Waterproofing

For liquid applied waterproofing for details, joints and surfaces see **Triflex ProTect** roof surface waterproofing system.

To increase the reflection value of the direct sunlight, the waterproofing for details and joints should be applied using Triflex ProDetail, and the surface waterproofing using Triflex ProTect in the colour 9010 white.

### Finish

The sealing of all vertical junctions, transitions and details must be carried out prior to the surface finishing with thixotropic Triflex ProSolar Finish. The product is thickened by the in-situ addition of 1 % by weight Triflex Liquid Thixo.

#### "Smooth" surface:

#### Triflex ProSolar Finish

Apply evenly and cross-coat using a Triflex Universal Roller.

Consumption: at least 0.70 kg/m<sup>2</sup>.

Can be walked on after approx. 2 hrs.

#### Surface "maintenance paths / hazard areas":

#### Triflex Cryl SC 237

Apply evenly to the finish using a Triflex universal roller.

Consumption: approx. 2.00 kg/m<sup>2</sup>.

Can be walked on after approx. 2 hrs.



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## System description

### Work interruptions

If work is interrupted for more than 12 hrs., or if soiled by rain etc., the intersection must be activated with Triflex Cleaner.

Airing time: at least 20 mins.

Transitions to subsequent waterproofing must overlap (incl.

Triflex Special Fleece) by a minimum of 10 cm. This also applies to junctions, transitions and detail solutions with Triflex ProDetail. The finishing must be applied within 24 hrs. If this application is delayed for any reason, the surface to be finished must be pre-treated with Triflex Cleaner.

### Product information

For information on applications, conditions for use and instructions for mixing, see product information (request if necessary):

**Triflex Cleaner**

**Triflex Cryl Primer 222**

**Triflex Cryl SC 237**

**Triflex Liquid Thixo**

**Triflex Metal Primer**

**Triflex Primer 610**

**Triflex ProDetail**

**Triflex ProTect**

**Triflex ProSolar Finish**

**Triflex Special Fleece**

**Triflex Special Fleece PF**

### Quality standard

All Triflex products are manufactured in accordance with the standards defined in ISO 9001. To ensure quality of workmanship, Triflex products are only installed by fully trained and qualified specialist contractors.

### Safety tips / Accident prevention

Read the safety data sheets before using the products.

### Required consumptions / Waiting times

The volumes required apply only to smooth, even substrates with a maximum roughness of  $R_t = 0.5$  mm.

Special allowance must be made for unevenness, roughness and porosity.

Specified flash times and waiting times apply to a substrate and ambient temperature of +20 °C.

### Information about tools

The Triflex tools mentioned in the system description are a guideline for correct application of the individual functional layers with the respective volumes of product. The use of Triflex tools is not mandatory as long as correct application of the Triflex products is assured.

### General notes

The system descriptions, system drawings and product information sheets form the basis for using Triflex products, and it is essential to follow these when planning and carrying out your building project. Any deviation from the technical information provided by Triflex GmbH & Co. KG that is current at the time the work is carried out may invalidate the warranty. Any project-related deviations require written approval from Triflex.

All the information is based on general regulations, directives and other technical rules. The general regulations applicable in the particular country of use must be respected.

Since the parameters can vary from case to case, the contractor is required to test the suitability, e.g. of the substrate.

Non-Triflex products must not be used with Triflex systems. Information is subject to change based on the interests of technical advancement or enhancement of our products.

### Tender texts

Please visit the Download section of the Triflex website at [www.triflex.com](http://www.triflex.com) to obtain the current standard specifications, which are available in a range of different file formats. Alternatively, visit the website [www.ausschreiben.de](http://www.ausschreiben.de) or [www.heinze.de](http://www.heinze.de).

### CAD drawings

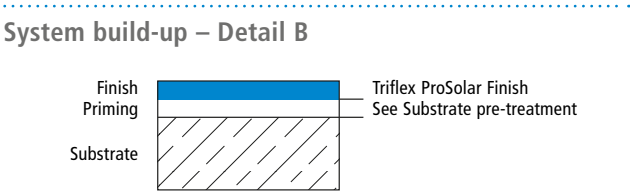
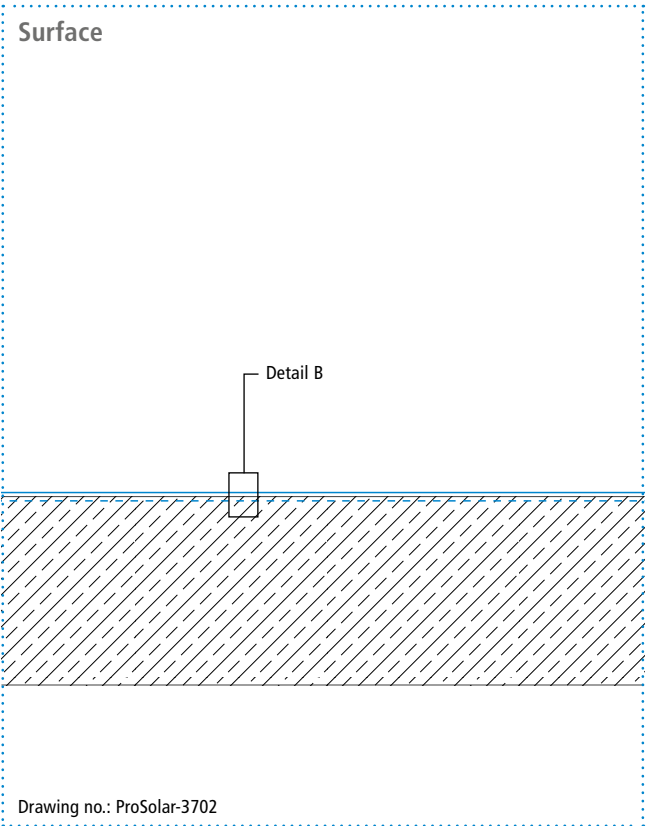
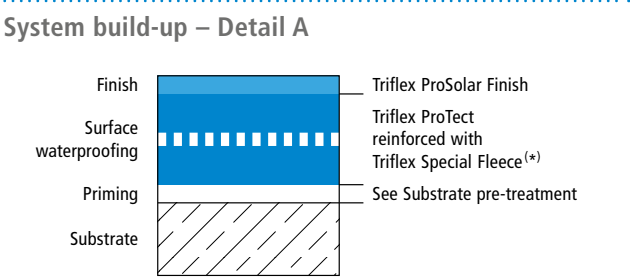
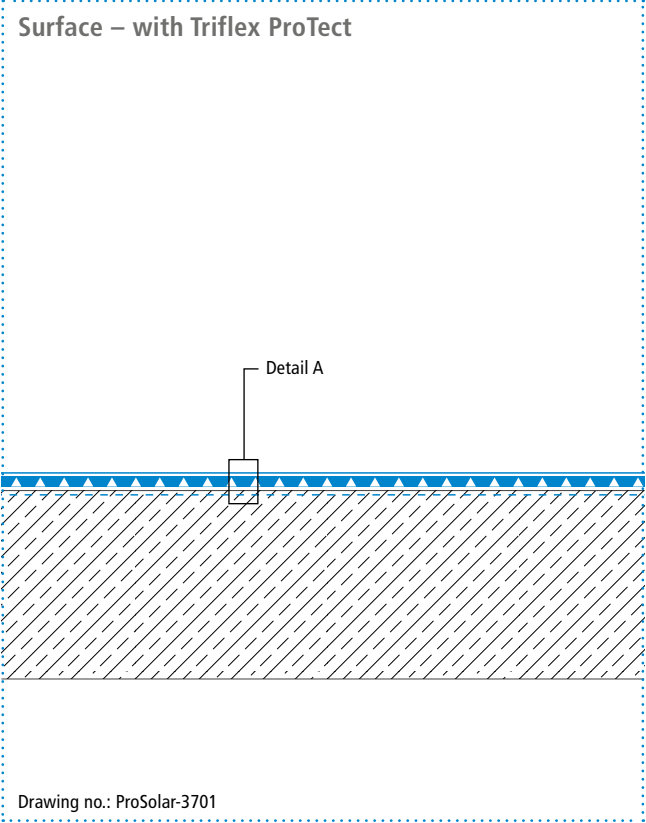
All CAD system drawings can be downloaded free of charge from the Download section of the Triflex website [www.triflex.com](http://www.triflex.com). Contact us at [technik@triflex.de](mailto:technik@triflex.de) to request further true-to-scale CAD drawings.



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## System drawings



(\*) Triflex Special Fleece or Triflex Special Fleece PF



Delivering solutions together.

**International**

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