

# Triflex ProTect®

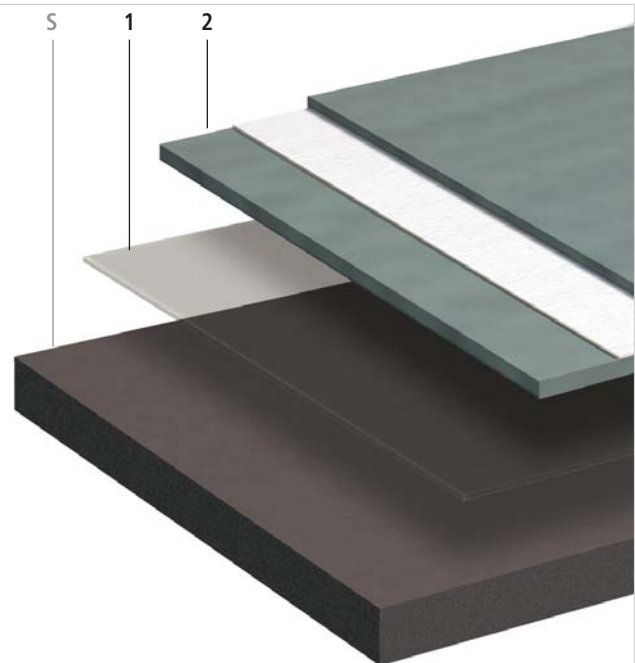
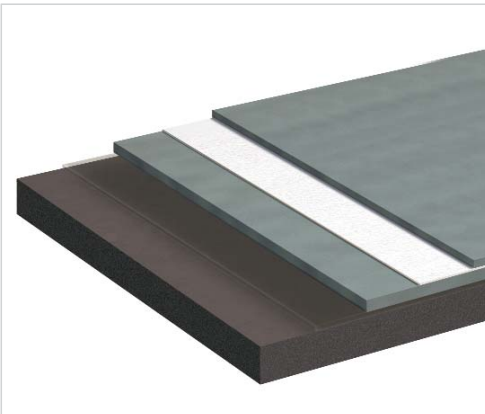
# System Data Sheet

Liquid applied, fully reinforced waterproofing system for roofs

## Properties

- Totally waterproof, thick layer system (>2mm Dry Film Thickness)
- Fully reinforced liquid applied material
- Seamless – with no joints, seams or fixings
- Elastomeric and dynamic crack bridging
- Totally cold applied
- Exceptionally fast curing
- Can be applied at low temperatures (-5 °C)
- Bridges unforeseen cracks
- Resistant to flexural fatigue
- Hydrolysis resistant – resistant to standing water
- Based on highly advanced PMMA technology
- Quick and easy to apply
- Compatible with a wide range of substrates
- Compatible with a wide range of single ply membranes
- Vapour permeable
- Suitable for all common roof constructions
- Suitable for in service use in all European climatic zones
- Fully bonded with excellent inter layer adhesion
- Chemical resistant
- UV resistant
- Tough and durable – resistant to static and dynamic loads
- Suitable for overlay with cementitious materials
- Solvent free
- Isocyanate free
- Halogen free
- Tailored design options:
  - Pigmented smooth finish
  - Pigmented anti-skid finish
  - Heavy duty wearing course for high traffic
- ETA certified – no. 03/0020
- Factory Mutual certified
- Underwriters Laboratories certified
- Fire resistant:
  - BS476:Part3:2004 – EXT.FAA
  - German Standard
    - Test method 1/prEN 1187; Classification B roof (t1) prEN 13501-5
  - Nordic Standard Nordtest NT Fire
    - Test method 2/prEN 1187; Classification B roof (t2) prEN 13501-5
  - French AFNOR Standard
    - Test method 3/prEN 1187; Classification B roof (t3) prEN 13501-5
  - Factory Mutual - FMRC / ASTM E108
  - Underwriters Laboratories - ANSI / UL 790
- Root resistant – FLL certified
- 10 year materials warranty as standard
- Optional extended warranties available

## System Build Up



S Substrate

1 Triflex Primer (if required)

2 Triflex ProTect® Reinforced Waterproofing Layer

## System Details

**Triflex Primer** Primer for sealing of substrate and to improve adhesion (refer to substrate preparation and priming schedule)

**Triflex ProTect® Reinforced Waterproofing Layer** - Waterproofing layer reinforced with a tough polyester fabric

## Applications

The system is suitable for the following roof constructions and build ups

### Constructions:

Concrete  
Metal deck  
Timber

### Build ups:

Uninsulated / overlay of existing membrane

Warm roof  
Inverted roof  
Paved roof  
Buried membrane roof  
Submerged roof  
Heavily trafficked roof  
Extensive green roof

# Triflex ProTect®

# System Data Sheet

## Substrate preparation and priming

Substrate	Preparation Notes	Priming	
		Triflex ProTect® main area	Triflex prodetail® for details
Asphalt	1	Triflex Cryl Primer 222	Triflex Cryl Primer 222
Polymer modified asphalt	1	Triflex Cryl Primer 222	Triflex Cryl Primer 222
Felt	2	No primer required	No primer required
SBS modified felt	2	No primer required	No primer required
APP modified felt	3	No primer required	No primer required
Bitumen	2	Triflex Cryl Primer 222	Triflex Cryl Primer 222
Concrete / screed	1 / 6	Triflex Cryl Primer 276	Triflex Cryl Primer 276
Lightweight concrete / render	1	Triflex Pox R103	Triflex Pox R103
Polymer modified concrete	1 / 6	Triflex Cryl Primer 276	Triflex Cryl Primer 276
Steel	4	No primer required	No primer required
Galvanised steel	4	No primer required	No primer required
Stainless steel	4	No primer required	No primer required
Aluminium	4	No primer required	No primer required
Copper	4	No primer required	No primer required
Zinc	4	No primer required	No primer required
Lead	4	No primer required	No primer required
Glass	4	No primer required	No primer required
Wood / timber / ply	2	Triflex Cryl Primer 276	Triflex Cryl primer 276
EPDM	2 / 7	Triflex Primer 530	Triflex Primer 530
Other substrates		Subject to testing	Subject to testing
Single ply membranes:			
CPE	4 / 8	No primer required	No primer required
EVA	2 / 8	No primer required	No primer required
PIB	2 / 8	No primer required	No primer required
PVC-P, nB	4 / 8	No primer required	No primer required
Other single ply membranes		Subject to testing	Subject to testing
Plastics (sheets, coatings, mouldings):			
UPVC / PVC	4	No primer required	No primer required
GRP	4	No primer required	No primer required
Acrylic Glass	4	No primer required	No primer required
PU (polyurethane)	5 / 7	No primer required	No primer required
PMMA (poly methylmethacrylate)	5 / 7	No primer required	No primer required
UP (polyester)	5 / 7	No primer required	No primer required
EP (epoxy)	5 / 7	No primer required	No primer required

For other substrates, consult Triflex (UK) Limited for required preparation methods and priming.

### Notes:

- 1 = Scarify, grind or lightly bead blast
- 2 = Scrape and sweep away contamination and clean by power washing (with or without approved detergent) as required
- 3 = Liquefy surface by application of heat and immediately top with quartz
- 4 = Rub down thoroughly with Triflex Cleaners, and abrade / grind metals and hard plastics to achieve a roughened surface  
(steel must be ground or blasted to bright metal – where all rust cannot be practically removed an approved active anti-corrosion primer may be used)
- 5 = Lightly abrade and carry out an adhesion test
- 6 = The equilibrium moisture content of cementitious materials must not exceed 6% or 75% RH. Where moisture levels are in excess of these values refer to Triflex Pox R103
- 7 = Subject to testing of insitu material and approval by Triflex (UK) Limited
- 8 = Where large areas are to be treated, test areas to be carried out to ensure ruckling does not occur

Where there are any doubts as to adhesion, carry out an adhesion test.

# Triflex ProTect®

# System Data Sheet

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## Substrate Assessment

In all cases the stability of the underlying substrate should be assessed prior to the commencement of work. See substrate testing section.

Surfaces to be coated must be firmly fixed and any existing known structural defects rectified prior to overlay.

## Substrate Preparation

Refer to substrate preparation and priming schedule.

Generally:

Remove existing paint and finishes etc. by grinding.

Ensure that the prepared surface is clean, dry and free from dust, laitence, grease, oil and any other contaminants.

## Priming

Refer to substrate preparation and priming schedule.

### Triflex Cryl Primer 222:

Apply with a lambswool roller (0.4kg/m<sup>2</sup> min.)

Rainproof after approx. 25 minutes.

Can be walked upon/next coat applied after approx. 45 minutes.

### Triflex Cryl Primer 276:

Apply with a lambswool roller (0.4kg/m<sup>2</sup> min.)

Rainproof after approx. 25 minutes.

Can be walked upon/next coat applied after approx. 45 minutes.

**Note:** For new cementitious materials where it is not practical to allow the substrate to hydrate to below 6% equilibrium moisture content and 75% RH, lightweight cementitious materials, or for existing cementitious substrates with higher levels of moisture, Triflex Pox R103 can be used where the equilibrium moisture content is less than 10%.

### Triflex Pox R103:

Apply with a lambswool roller (0.5kg/m<sup>2</sup> min.)

Can be walked on after approx. 8 hours.

Next coat applied after approx. 18 hours.

### Triflex Primer 530:

Apply with a lambswool roller (0.04 - 0.08kg/m<sup>2</sup>)

Rainproof after approx. 30 minutes.

Can be walked upon/next coat applied after approx. 30 minutes.

## Surface Repairs and Filling

Cut out blisters and repair minor indentations with Triflex Cryl Paste or Triflex Cryl Paste Mortar. Allow to dry for a minimum of 1 hour.

Fill all voids in vertical surfaces and at upstand transitions with Triflex Cryl Paste and allow to dry for a minimum of 1 hour.

Larger indentations can be filled with Triflex Cryl RS240 (cementitious substrates), Triflex Cryl Mortar or Triflex Cryl Paste Mortar (non-cementitious substrates).

## Interface Details

Apply in accordance with standard and project specific sketch details.

### General Details:

Apply Triflex prodetail® (2.0 kg/m<sup>2</sup> min.) with a lambswool roller.

Roll a strip of Triflex 110g Reinforcement into the wet resin, pressing trapped air free using the lambswool roller, ensuring a minimum 50mm overlap between the reinforcement sheets.

Apply Triflex prodetail® (1.0 kg/m<sup>2</sup> min.) wet on wet to ensure full saturation of the fleece.

Rainproof after approx. 30 minutes

Can be walked on/next coat applied after approx. 45 minutes.

### Complex Details:

Where due to access restrictions, or complexity of the detail, Triflex prodetail® is not practical:

Apply Triflex Cryl R 295 fibre reinforced resin (1.5 kg/m<sup>2</sup> min.) with a brush and allow to cure for a minimum of 45 minutes.

Apply a further layer of Triflex Cryl R 295 fibre reinforced resin (1.5 kg/m<sup>2</sup> min.) by brush.

Rainproof after approx. 30 minutes.

Can be walked upon/next coat applied after approx. 45 minutes.

## Main Area

Apply an even layer of Triflex ProTect® (2.0 kg/m<sup>2</sup> min.) with a lambswool roller.

Roll Triflex 110g Reinforcement into the wet resin, pressing trapped air free using the lambswool roller, ensuring a minimum 50mm overlap between the reinforcement sheets.

Apply Triflex ProTect® (1.0 kg/m<sup>2</sup> min.) wet on wet to ensure full saturation of the fleece.

Rainproof after approx. 30 minutes.

Can be walked upon/next coat applied after approx. 45 minutes.

Able to withstand stress after approx. 2 hours.

## Optional Heavy Duty Wearing Course

Apply Triflex ProTect® (1.5kg/m<sup>2</sup> min.) with a lambswool roller.

Embed into the liquid layer a full cover of crystal quartz (0.7-1.2mm), or basalt (1.0 – 1.6mm) (7.0kg/m<sup>2</sup>) approx. Allow to dry for a minimum of 1 hour, sweep away excess aggregate and vacuum clean.

Rainproof after approx 30 minutes.

Can be walked upon/next coat applied after approx. 45 minutes.

Able to withstand stress after approx. 2 hours.

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## Optional Finishes

### Interface Details:

Apply Triflex Cryl Finish 205 (0.5kg/m<sup>2</sup>min) using a lambswool roller.

Rainproof after approx. 30 minutes.

Can be walked upon after approx. 2 hours.

**Note:** For interface details in excess of 250mm high, use Triflex Cryl Finish 205 Thixo.

### Main Area:

#### Smooth Finish

Apply Triflex Cryl Finish 205 (0.5kg/m<sup>2</sup> min.) using a lambswool roller.

Rainproof after approx. 30 minutes.

Can be walked upon after approx. 2 hours.

Able to withstand stress after approx. 3 hours.

#### Anti-Skid Finish

Apply Triflex Cryl Finish 205 Anti-Skid (0.35kg/m<sup>2</sup> min.) using a lambswool roller.

Rainproof after approx. 30 minutes.

Can be walked upon after approx. 2 hours.

Able to withstand stress after approx. 3 hours.

#### Finish to Optional Heavy Duty Wearing Course

Apply Triflex Cryl Finish 205 (0.65kg/m<sup>2</sup> min.), (0.8kg/m<sup>2</sup> min. if over basalt) using a hard squeegee and a dry lambswool roller.

Rainproof after approx. 30 minutes.

Can be walked upon after approx. 2 hours.

Able to withstand stress after approx. 3 hours.

## Interruptions During Works

If work is interrupted for more than 12 hours, use Triflex Cleaner to clean and reactivate the transition area.

Evaporation time: at least 20 minutes - overlay within 60 minutes.

For reinforced details, the subsequent waterproofing layers must overlap by at least 100 mm, including the Reinforcement.

## System Components

Please refer to the appropriate Product Data Sheet for details about areas of application/application conditions/mixing instructions (available on request):

**Triflex Cryl Primer 222**

**Triflex Cryl Primer 276**

**Triflex Pox R103**

**Triflex Primer 530**

**Triflex Cryl Paste**

**Triflex Cryl Paste Mortar**

**Triflex Cryl RS240**

**Triflex Cryl Mortar**

**Triflex 110g Reinforcement**

**Triflex prodetail®**

**Triflex Cryl R295**

**Triflex ProTect®**

**Triflex Cryl Finish 205**

**Triflex Cryl Finish 205 Anti-Skid**

## Expansion Joints

Consult Triflex (UK) Limited for confirmation of design details required.

## Quality Standard

All products are manufactured to ISO 9001.

## Substrate Testing

Prior to the commencement of work, the Contractor must check and only proceed if he has satisfied the following requirements:

**Dimensional stability:** All factors which may affect the subsequent performance of the roof e.g. saturated insulation, failed structural elements etc. must be repaired

**Moisture:** Prior to overlay with Triflex systems, the equilibrium moisture content of the substrate must not exceed 6% and 75% RH. For cementitious substrates with higher levels of moisture (less than 10% equilibrium) refer to Triflex Pox R103.

**Adhesion:** Trial areas to be prepared to ensure that the System achieves a minimum bond to the substrate of:

Concrete, concrete repair materials, screeds and mortars: 1.5N/mm<sup>2</sup>

All other substrates: 0.8N/mm<sup>2</sup>

## Health and Safety

Refer to product Health and Safety data prior to using the materials.

## Coverage Rates

The coverage rates given are guidelines based on smooth, level substrates. Allowances must be made if the substrate is uneven, rough or porous.

## Drying Times

The drying times stated are at +20°C and are dependent upon weather conditions.

## Important Notes

It is the Contractors' responsibility to ensure that the substrate is suitable and that the system is applied in all areas in accordance with Technical Data Sheets, Application Guidelines and ETA certificate in force at the time.

The advice we can provide on the application of our products is based on extensive development work as well as many years of experience and is given to the best of our knowledge. However, the wide variety of requirements for a building under the most diverse conditions mean that it is necessary for the Contractor to test the product for suitability in any given case. We reserve the right to make alterations in keeping with technical developments or improvements.