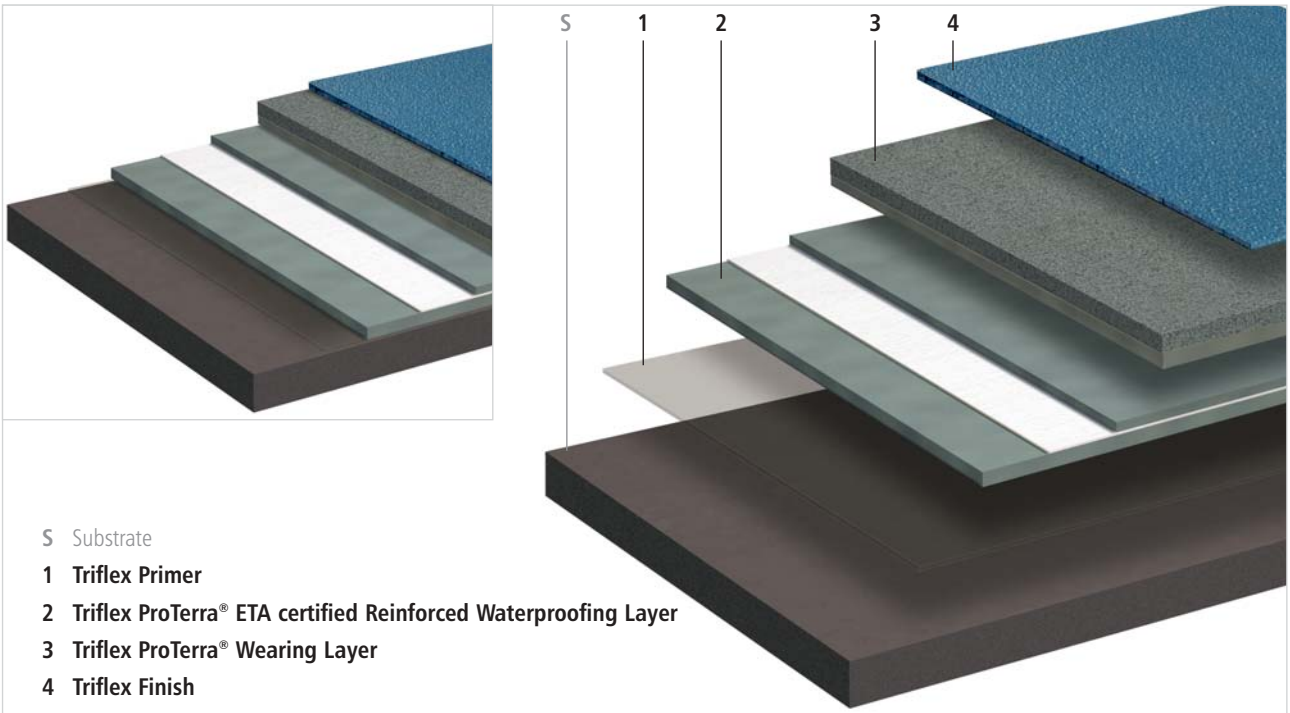
Triflex BTS-T System Data Sheet

Fast curing, thick layer, waterproofing and surfacing system for walkways, balconies and terraces over occupied premises - ETA certified fully reinforced waterproofing membrane

Properties

- Totally waterproof, thick layer system (>4mm Dry Film Thickness)
- Fully reinforced liquid applied materials
- ETA certified waterproofing membrane - no. 04/0019 (25 year durability statement)
- Available with the following finish options:
  - 0.7 - 1.2mm crystal quartz with pigmented seal
  - 0.7 - 1.2mm coloured quartz with clear seal
  - 1.0 - 1.6mm basalt with Traffic Grey pigmented seal
- Seamless - with no joints, seams or fixings
- Elastomeric and dynamic crack bridging
- Anti-skid
- Tough, highly impact and abrasion resistant
- Durable - resistant to static and dynamic loads
- Totally cold applied
- Exceptionally fast curing
- 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
- Suitable for all common walkway, balcony and terrace constructions
- Fire resistant:
  Waterproofing layer:
  - German Standard
    Test method 1/prENV 1187; Classification B roof (t1) prEN 13501-5
  - Nordic Standard Nordtest NT Fire
    Test method 2/prENV 1187; Classification B roof (t2) prEN 13501-5
  - French AFNOR Standard
    Test method 3/prENV 1187; Classification B roof (t3) prEN 13501-5
- Fully bonded with excellent inter layer adhesion
- Chemical resistant
- Resistant to Chloride and Carbon Dioxide ingress
- Vapour permeable
- Low temperature curing - 0˚c
- UV resistant
- Solvent free
- Isocyanate free
- Halogen free
- Tailored design options
- 10 year materials warranty as standard
- Optional extended warranties available

System Build Up



S Substrate
1 **Triflex Primer**
2 **Triflex ProTerra® ETA certified Reinforced Waterproofing Layer**
3 **Triflex ProTerra® Wearing Layer**
4 **Triflex Finish**

System Details

Triflex Primer - Primer for sealing of substrate and to improve adhesion.

Triflex ProTerra® Reinforced Waterproofing Layer - Waterproofing layer fully reinforced with a tough polyester fabric.

Triflex ProTerra® Wearing Layer - Incorporating a hard wearing crystal quartz, coloured quartz or basalt aggregate.

Triflex Finish - Abrasion resistant system seal coat.

Applications

The system is suitable for the waterproofing and surfacing of walkways, balconies and terraces over occupied premises.

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Substrate preparation and priming

		Priming	
Substrate	**Preparation Notes**	**Triflex BTS-T main area**	**Triflex ProDetail® for details**
Paving mastic asphalt	1	Triflex Cryl Primer 222	Triflex Cryl Primer 222
Roofing mastic asphalt	1	N/A details only	Triflex Cryl Primer 222
Hot Rolled / Stone Mastic Asphalt (HRA/SMA)	1 / 8	Triflex Cryl Primer 222	Triflex Cryl Primer 222
Felt	2	N/A details only	No primer required
SBS Felt	2	N/A details only	No primer required
APP Felt	3	N/A details only	No primer required
Concrete / Screed	1 / 6	Triflex Cryl Primer 276	Triflex Cryl Primer 276
Lightweight concrete	1 / 6	Triflex Cryl Primer 276	Triflex Cryl Primer 276
Polymer modified concrete repair materials	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	N/A details only	No primer required
Aluminium	4	N/A details only	No primer required
Copper	4	N/A details only	No primer required
Zinc	4	N/A details only	No primer required
Lead	4	N/A details only	No primer required
Glass	4	N/A details only	No primer required
Timber	2 / 9	Triflex Cryl Primer 276	Triflex Cryl Primer 276
Plastics (sheets, coatings, mouldings)			
CPE	4	N/A details only	No primer required
EVA	2	N/A details only	No primer required
PIB	2	N/A details only	No primer required
PVC-P, nB	4	N/A details only	No primer required
UPVC	4	N/A details only	No primer required
GRP	4	N/A details only	No primer required
PU (polyurethane)	5 / 7	No primer required	No primer required
PMMA (acrylic)	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 = Clean thoroughly

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 = For HRA and SMA, increase primer consumption by 50% and use maximum practical catalyst (minimum 6%)

9 = For domestic applications only and subject to structural suitability - see Substrate Assessment section

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

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Substrate Assessment

In all cases the condition and stability of the underlying substrate should be assessed prior to the commencement of work. See Substrate Testing section.

Concrete structures should be designed in accordance with BS8110/CP110.

Timber decks (domestic applications only) - Deck must be constructed from minimum 19mm marine ply, with joists at maximum 400mm centres. Deck to be mechanically fixed with countersunk fixings at 100mm centres along all joists and noggins, with all joints between boards filled with PVA adhesive to create a homogenous, rigid deck.

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/m² min.)
Rainproof after approx. 30 minutes.
Can be walked upon/next coat applied after approx. 45 minutes.

Triflex Cryl Primer 276:

Apply with a lambswool roller (0.4kg/m² min.)

Rainproof after approx. 30 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, 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/m² min.)

Can be walked on after approx. 8 hours.

Next coat applied after approx. 18 hours.

Able to withstand stress after approx. 24 hours.

Surface Repairs and Filling

Cut out blisters and repair all minor indentations with scratch coat of Triflex Cryl RS 233 or Triflex Cryl Paste. 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 RS 240 (cementitious substrates), Triflex Cryl Mortar or Triflex Cryl Paste Mortar (non-cementitious substrates).

Joints between boards (timber decks only)

Apply an even layer of Triflex ProTerra® (2.0 kg/m² min.) with a lambswool roller directly over the joints.

Roll a minimum 200mm wide 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 ProTerra® (1.0 kg/m² 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.

Interface Details

Apply in accordance with standard and project specific sketch details.

General Details:

Apply Triflex ProDetail® (2.0 kg/m² 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/m² 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/m² 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/m² min.) by brush.

Rainproof after approx. 30 minutes.

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

Note: Where details may be subject to mechanical damage, consult Triflex (UK) Limited for mechanical protection solutions.

Main Area

Reinforced Waterproofing Layer:

Apply an even layer of Triflex ProTerra® (2.0 kg/m² 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 ProTerra® (1.0 kg/m² 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.

Fleece lap levelling:

Apply scratch levelling coat of Triflex Cryl Paste over laps in fleece. Allow to dry for a minimum of 1 hour.

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Wearing Layer:

Apply Triflex ProTerra® (1.5kg/m² min.) with a lambswool roller.

Embed into the liquid layer a full cover of crystal quartz (0.7-1.2mm), coloured quartz (0.7 - 1.2mm) or basalt (1.0-1.6mm) (7.0kg/m²) 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 after approx. 45 minutes.

Next coat applied after approx. 2 hours.

Finish

Interface Details

Apply Triflex Cryl Finish 205 (0.5kg/m²min) using a lambswool roller.

Rainproof after approx. 30 minutes.

Can be walked upon after approx. 1 hour.

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

Main Area

Crystal quartz / basalt systems (pigmented seal) - Apply Triflex Cryl Finish 205 (0.65kg/m² min.), (0.80kg/m² min.) if over basalt) using a lambswool roller and remove excess material / level with a dry lambswool roller.

Coloured quartz systems (clear seal) - Apply Triflex Cryl Finish 202 (0.65kg/m² min.) using a lambswool roller and remove excess material / level with a dry lambswool roller.

Rainproof after approx. 30 minutes.

Can be walked upon after approx. 1 hour.

Can be subjected to loads after approx. 3 hours.

Expansion Joints

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

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 Cryl Paste
Triflex Cryl RS 233
Triflex Cryl RS 240
Triflex Cryl Mortar
Triflex Cryl Paste Mortar
Triflex 110g Reinforcement
Triflex ProDetail®
Triflex Cryl R 295
Triflex ProTerra®
Triflex Cryl Finish 205
Triflex Cryl Finish 202

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 system e.g. failed structural elements etc. must be repaired.

Hardness: All concrete substrates, concrete repair materials, screeds and mortars shall be cured and allowed to achieve a minimum hardness of 25N/mm².

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/mm²

All other substrates: 0.8N/mm²

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.