





# Triflex waterproofing and coating

#### Dear Customer,

The Triflex Instructions for use are designed to assist you in the practical application of Triflex systems and products. These instructions provide information about application techniques and aim to provide immediate solutions for any queries that might arise on site. It does not show all the processing steps for every single system, from application of the primer and waterproofing and/or coating right through to application of the finish, as the frequent repetitions this would require would make the manual quite unwieldy. This manual therefore describes standard procedures which are used in varying combinations for waterproofing flat roofs, waterproofing/coating balconies and terraces, as well as waterproofing/coating parking decks, where many of the details are the same.

These Instructions for use are part of the range of tools available to Triflex Partners and is intended to be used on the construction site. The Triflex system descriptions should continue to be used as a planning instrument.

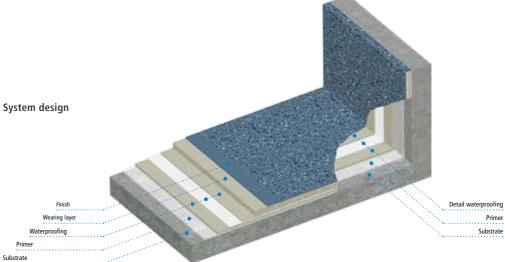
All information is based on state-of-the-art technology at the time of publication. We reserve the right to make changes in keeping with technical developments or with the purpose of optimising Triflex products.

Your Triflex team



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## **General information**

#### Health and safety:

When working with products containing construction chemicals, always ensure compliance with the following health and safety precautions:

- No smoking, eating or drinking while working.
- Avoid contact with the eyes and skin.
- Always keep chemicals away from food and beverages.
- Always wear protective clothing.
- · Always ensure compliance to safety data sheets.

#### Important note:

When transporting, storing and working with Triflex products, always ensure compliance to all pertinent safety data sheets and technical codes of practice, and pay attention to all markings, hazard information and safety tips on the containers. If you have any queries please contact: Safety & Environment Dept., Fon: +49 571 9339-176

#### Storage:

- Keep containers firmly sealed.
- Containers must be stored in a dry, cool (but frost-free) and well ventilated place.
- · Protect against heat and direct sunlight.
- Storage stability: at least 6 months.
- In winter, store containers at room temperature prior to use where possible.

#### Substrate requirements:

The suitability of the substrate must always be checked on a case-by-case basis. The substrate must be clean, dry and free of cement bloom, dust, oil, grease and other adhesion-reducing dirt.

• Moisture:

When carrying out coating 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 that, an abhesive film of moisture may form on the surface (see table on page 8).

#### • Hardness:

Mineral surfaces must be permitted to fully harden for at least 28 days.

#### • Adhesion:

The following tensile strengths must be verified on pre-treated test surfaces: Concrete: in the centre, at least 1.5 N/mm<sup>2</sup>, individual value not less than 1.0 N/mm<sup>2</sup>. Screed: in the centre, at least 1.0 N/mm<sup>2</sup>, individual value not less than 0.7 N/mm<sup>2</sup>. Asphalt: in the centre, at least 0.8 N/mm<sup>2</sup>, individual value not less than 0.5 N/mm<sup>2</sup>.

#### • Gradient / evenness:

Before commencing any coating work and during the work itself, it is essential to ensure the correct gradient and evenness of the substrate. Any corrections required must be taken into account during this work.

#### • Dimensional tolerances:

When carrying out coating work, always ensure compliance with the permissible tolerances for building construction (DIN 18202, Table 3, line 4).

#### Substrate pre-treatment:

See substrate table on page 9.

## **General information**

#### Conditions for use:

- Triflex products can be used within the temperature ranges stipulated on the container label and in the product information.
- Always wear a face mask when using Triflex products containing solvents or monomers in enclosed spaces, or when air limit values are exceeded (see point 8 of safety data sheet).

Furthermore, always ensure forced ventilation with a minimum 7-fold air exchange per hour.

#### Volumes required and waiting times:

The specified volumes apply only to smooth, even surfaces. Special allowances must be made for unevenness, roughness and porosity. Information regarding airing and waiting times apply to a substrate and ambient temperature of +20 °C.

#### Mixing instructions:

- Stir the base resin thoroughly, then add the appropriate amount of catalyst or hardener and continue mixing with a slow-running mixing machine. Then transfer to another container and mix again.
- The mixing ratio of base resin to catalyst or hardener corresponds to the proportion in which they are supplied or is specified on the label on the container.
   Please also refer to the product information.

#### What to do if work is interrupted:

If work is interrupted for more than 12 hours, or soiled by rain etc., the intersection must be activated with Triflex Cleaner and left to evaporate for at least 20 minutes. Transitions to subsequent waterproofing must overlap (including Triflex Special Fleece) by a minimum of 10 cm. This also applies to junctions, transitions and detail solutions with Triflex ProDetail. The next coat must be applied within 24 hours. If this application is delayed for any reason, the surface to be sealed must be pre-treated with Triflex Cleaner.

#### Cleaning of tools:

Tools must be cleaned thoroughly with Triflex Cleaner on completion of work or when work is interrupted for extended periods.

Wait for approx. 20 to 25 minutes for the cleaner to evaporate before using the tool again.

#### Clean working environment:

The areas used for mixing and transferring products to other containers must be covered with a suitable plastic sheet (e.g., PE sheet) before work commences. Resin components on the substrate to be coated that have not been cured with hardener will cause adverse chemical reactions.

#### If it suddenly rains during the cure time:

Dry the substrate, check the areas concerned for any defective spots and if necessary repeat the relevant work step after appropriate pre-treatment (remove defective spots with Triflex Cleaner, wait for approx. 20 to 25 minutes for the cleaner to evaporate, abrade the defective spots thoroughly).

#### Ventilating the area to be coated:

Inadequate ventilation will cause adverse chemical reactions when working with PMMA products. In such cases, forced ventilation must ensure that the air is changed 7 times per hour during the application and the cure time. If any problems occur as a result of inadequate ventilation, take the following steps: Remove areas that have not cured fully, clean defective spots with Triflex Cleaner, allow to evaporate for at least 20 to 25 minutes, then, then abrade the defective spots thoroughly. Repeat the application process.

Please also ensure compliance with the EC safety data sheets for individual components.



## Dew point temperature

| Air         | Dew point temperature in °C at a relative humidity of: |       |       |       |       |       |       |       |       |       |       |       |
|-------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| temperature | 30 %   | 40 %  | 50 %  | 55 %  | 60 %  | 65 %  | 70 %  | 75 %  | 80 %  | 85 %  | 90 %  | 95 %  |
| °C          | °C   | °C    | °C    | °C    | °C    | °C    | °C    | °C    | °C    | °C    | °C    | °C    |
| +30         | +10.5  | +14.9 | +18.4 | +20.0 | +21.4 | +22.7 | +23.9 | +25.1 | +26.2 | +27.2 | +28.2 | +29.1 |
| +28         | +8.8   | +13.1 | +16.6 | +18.1 | +19.5 | +20.8 | +22.0 | +23.2 | +24.2 | +25.2 | +26.2 | +27.1 |
| +26         | +7.1   | +11.4 | +14.8 | +16.3 | +17.6 | +18.9 | +20.1 | +21.2 | +22.3 | +23.3 | +24.2 | +25.1 |
| +24         | +5.4   | +9.6  | +12.9 | +14.4 | +15.8 | +17.0 | +18.2 | +19.3 | +20.3 | +21.3 | +22.3 | +23.2 |
| +22         | +3.6   | +7.8  | +11.1 | +12.6 | +13.9 | +15.1 | +16.3 | +17.4 | +18.4 | +19.4 | +20.3 | +21.2 |
| +20         | +1.9   | +6.0  | +9.3  | +10.7 | +12.0 | +13.2 | +14.4 | +15.4 | +16.4 | +17.4 | +18.3 | +19.2 |
| +18         | +0.2   | +4.2  | +7.4  | +8.8  | +10.1 | +11.3 | +12.5 | +13.5 | +14.5 | +15.4 | +16.3 | +17.2 |
| +16         | -1.5   | +2.4  | +5.6  | +7.0  | +8.3  | +9.4  | +10.5 | +11.6 | +12.6 | +13.5 | +14.4 | +15.2 |
| +14         | -3.3   | +0.6  | +3.8  | +5.1  | +6.4  | +7.5  | +8.6  | +9.6  | +10.6 | +11.5 | +12.4 | +13.2 |
| +12         | -5.0   | -1.2  | +1.9  | +3.3  | +4.5  | +5.6  | +6.7  | +7.7  | +8.7  | +9.6  | +10.4 | +11.2 |
| +10         | -6.8   | -3.0  | +0.1  | +1.4  | +2.6  | +3.7  | +4.8  | +5.8  | +6.7  | +7.6  | +8.4  | +9.2  |
| +8          | -8.5   | -4.8  | -1.8  | -0.5  | +0.7  | +1.8  | +2.9  | +3.9  | +4.8  | +5.6  | +6.5  | +7.3  |
| +6          | -10.2  | -6.6  | -3.6  | -2.3  | -1.2  | -0.1  | +1.0  | +1.9  | +2.8  | +3.7  | +4.5  | +5.3  |
| +4          | -12.0  | -8.4  | -5.5  | -4.2  | -3.1  | -2.0  | -1.0  | 0.0   | +0.9  | +1.7  | +2.5  | +3.3  |
| +2          | -13.7  | -10.2 | -7.3  | -6.1  | -4.9  | -3.9  | -2.9  | -2.0  | -1.1  | -0.3  | +0.5  | +1.3  |
| 0           | -15.5  | -12.0 | -9.2  | -7.9  | -6.8  | -5.8  | -4.8  | -3.9  | -3.0  | -2.2  | -1.4  | -0.7  |
| -2          | -17.3  | -13.8 | -11.0 | -9.8  | -8.7  | -7.7  | -6.7  | -5.8  | -5.0  | -4.2  | -3.4  | -2.7  |
| -4          | -19.0  | -15.6 | -12.9 | -11.7 | -10.6 | -9.6  | -8.7  | -7.8  | -6.9  | -6.1  | -5.4  | -4.7  |

#### For example:

An air temperature of +20 °C with 60 % relative humidity impacting on surfaces of +12 °C or cooler will produce condensation.

#### **Please note:**

During application, the surface temperature must be at least 3  $^{\circ}$ C above the dew point temperature. Below that, an abhesive film of moisture may form on the surface.

## Substrate pre-treatment

| Substrate                                  | Pre-treatment  | Primer   |
|--|--|--|
| Acrylic glass                              | Abrade with Triflex Cleaner, roughen surface                                     | No primer  |
| Aluminium                                  | Abrade with Triflex Cleaner  | Triflex Metal Primer (1)   |
| Asphalt                                    | Grinding, milling or dust-free shot-blasting                                     | Triflex Cryl Primer 222  |
| Cold bitumen coating                       | Adhesion test  | Triflex Cryl Primer 222  |
| Composite thermal insulation systems       | Remove any loose objects   | Triflex Pox Primer 116+<br>Triflex Pox R 100   |
| Concrete                                   | Grinding, milling or dust-free shot-blasting                                     | Triflex Cryl Primer 276<br>Triflex Cryl Primer 287<br>Triflex Pox Primer 116+<br>Triflex Pox R 100 |
| Copper                                     | Abrade with Triflex Cleaner  | Triflex Metal Primer <sup>(1)</sup>  |
| poxy resin coating                         | Roughen surface, adhesion and compatibility test                                 | No primer  |
| RP / Skylight frame                        | Abrade with Triflex Cleaner, roughen surface                                     | No primer  |
| Glass                                      | Abrade with Triflex Glass Cleaner, adhesion test                                 | Triflex Glass Primer   |
| Hot bitumen coating                        | Adhesion test  | Triflex Cryl Primer 222  |
| Lightweight concrete                       | Remove any loose objects   | Triflex Cryl Primaire 276<br>Triflex Cryl Primaire 287<br>Triflex Pox R 100                        |
| Mortar, resin-modified                     | Grinding, milling or dust-free shot-blasting,<br>adhesion and compatibility test | Triflex Pox Primer 116+<br>Triflex Pox R 100   |
| Paints                                     | Completely grind off   | See substrate  |
| Plaster/masonry                            | Remove any loose objects   | Triflex Cryl Primer 276<br>Triflex Cryl Primer 287<br>Triflex Pox Primer 116-<br>Triflex Pox R 100 |
| Plastic sheeting (PIB)                     | Roughen surface, adhesion test   | On request (2)   |
| Plastic sheeting (PVC-P, nB), (EVA)        | Abrade with Triflex Cleaner  | No primer  |
| Plastic sheeting (TPO, FPO, EPDM)          | Abrade with Triflex Cleaner, roughen surface, adhesion test<br>compulsory        | On request <sup>(2)</sup>  |
| Polymer bitumen sheeting (PY-E) mod. (SBS) |  | No primer  |
| Polymer bitumen sheeting (PY-P) mod. (APP) | Adhesion test  | Triflex Cryl Primer 222  |
| PU coating                                 | Roughen surface, adhesion and compatibility test                                 | No primer  |
| PVC mouldings, rigid                       | Abrade with Triflex Cleaner, roughen surface                                     | No primer  |
| Screeds                                    | Grinding, milling or dust-free shot-blasting                                     | Triflex Cryl Primer 276<br>Triflex Cryl Primer 287<br>Triflex Pox Primer 116-<br>Triflex Pox R 100 |
| Stainless steel                            | Abrade with Triflex Cleaner  | Triflex Metal Primer (1)   |
| Steel, galvanised                          | Abrade with Triflex Cleaner  | Triflex Metal Primer (1)   |
| Tiles                                      | Mechanically remove glaze  | Triflex Cryl Primer 276<br>Triflex Cryl Primer 287<br>Triflex Pox Primer 116+                      |
| Wood                                       | Remove paints  | Triflex Cryl Primer 276<br>Triflex Cryl Primer 287<br>Triflex Pox Primer 116-<br>Triflex Pox R 100 |
| Zinc                                       | Abrade with Triflex Cleaner  | Triflex Metal Primer <sup>(1)</sup>  |

 (1) Alternative to priming with Triflex Metal Primer: Abrade with Triflex Cleaner, roughen surface. Loose rust and blistering rust must first be removed.
 (2) Depending on the type of sheeting, e.g., using Triflex Primer 610. Information on other substrates is available on request. (technik@triflex.de).

Please note: The choice of primer is specified in the current system description.



## **Product information**

| Triflex products                 | Resin base  | Pack size 1               | Volume                          | Pot life <sup>2</sup> | Rainproof <sup>2</sup> | Can be<br>recoated <sup>2</sup> | Can be<br>loaded <sup>2</sup> |
|----------------------------------|-------------|---------------------------|---------------------------------|-----------------------|------------------------|---------------------------------|-------------------------------|
| Primers                          | Resili base | T dCK SIZE                | volume                          | Totime                | Namproor               | recoated                        | loaded                        |
| Triflex Cryl Primer 222          | PMMA        | 10.00 kg                  | 0.40 kg/m <sup>2</sup>          | approx. 15 min        | approx. 25 min         | approx. 45 min                  | approx 2 hrs                  |
| Triflex Cryl Primer 276          | PMMA        | 10.00 kg                  | 0.40 kg/m <sup>2</sup>          | approx. 15 min        | approx. 25 min         | approx. 45 min                  |                               |
| Triflex Cryl Primer 287          | PMMA        | 10.00 kg                  | 0.35 kg/m <sup>2</sup>          | approx. 15 min        | approx. 25 min         | approx. 45 min                  |                               |
| Triflex Glass Primer             | -           | 0.75 litres               | 0.05 litres/m <sup>2</sup>      |                       |                        | approx. 15–180 min              |                               |
| Triflex Metal Primer             | -           | 0.50 litres / 2.50 litres | 0.08-0.10 litres/m <sup>2</sup> |                       |                        | approx. 30–60 min               |                               |
| Triflex Pox Primer 116+          | EP          | 25.00 kg                  | 0.30 kg/m <sup>2</sup>          | approx. 15 min        |                        | approx. 12–24 hrs               | approx. 7 days                |
| Triflex Pox R 100                | EP          | 1.00 / 8.00 kg            | 0.30 kg/m <sup>2</sup>          | approx. 30 min        | approx. 8 hrs          | approx. 12 hrs                  | approx. 24 hrs                |
| Triflex Pox R 103                | EP          | 7.80 kg                   | 0.30-0.50 kg/m <sup>2</sup>     | approx. 15 min        | approx. 8 hrs          | approx. 12 hrs                  | approx. 24 hrs                |
| Triflex Primer 610               | -           | 0.50 litres               | 40-80 g/m <sup>2</sup>          |                       | approx. 20 min         | approx. 20 min                  |                               |
| Triflex Than Primer 533          | PUR         | 0,40 litres               | 0.10 litres/m <sup>2</sup>      | 20 min–12 hrs         |                        |                                 |                               |
| Triflex Towersafe Primer         | PMMA        | 10.00 kg                  | 0.40 kg/m <sup>2</sup>          | approx. 15 min        | approx. 25 min         | approx. 45 min                  | approx. 2 hrs                 |
| Repairs                          |             |                           | -                               |                       |                        |                                 |                               |
| Triflex Cryl Level 215           | PMMA        | 250.00 kg                 | 2.20 kg/m <sup>2</sup> /mm      | approx. 15 min        | approx. 30 min         | approx. 45 min                  | approx. 1 hr                  |
| Triflex Asphalt Repro            | PMMA        | 17.50 kg                  | 1.75 kg/m <sup>2</sup> /mm      | approx. 15 min        | approx. 20 min         |                                 | approx. 25 min                |
| Triflex Concrete Repro           | PMMA        | 17.50 kg                  | 1.75 kg/m²/mm                   | approx. 15 min        | approx. 20 min         |                                 | approx. 25 min                |
| Triflex Cryl RS 240              | PMMA        | 22.25 kg                  | 2.20 kg/m <sup>2</sup> /mm      | approx. 15 min        | approx. 30 min         | approx. 45 min                  | approx. 1 hr                  |
| Triflex Cryl RS 242              | PMMA        | 22.25 kg                  | 2.20 kg/m <sup>2</sup> /mm      | approx. 15 min        | approx. 45 min         | approx. 1 hr                    | approx. 2 hrs                 |
| Triflex Cryl Paste               | PMMA        | 15.00 kg                  | 1.40 kg/m <sup>2</sup> /mm      | approx. 10 min        | approx. 30 min         | approx. 1 hr                    |                               |
| Triflex Easy Repair Set Asphalt  | PMMA        | 11.25 kg                  | 2.00 kg/m <sup>2</sup> /mm      | approx. 15 min        | approx. 30 min         |                                 | approx. 45 min                |
| Triflex Easy Repair Set Concrete | PMMA        | 11.25 kg                  | 2.00 kg/m <sup>2</sup> /mm      | approx. 15 min        | approx. 30 min         |                                 | approx. 45 min                |
| Triflex Pox Mortar               | EP          | 8.00 / 25.00 kg           | 2.20 kg/m <sup>2</sup> /mm      | approx. 20 min        | approx. 8 hrs          | approx. 12 hrs                  | approx. 7 days                |
| Waterproofing                    |             |                           |                                 |                       |                        |                                 |                               |
| Triflex ProDetail                | PMMA        | 15.00 kg                  | 3.00 kg/m <sup>2</sup>          | approx. 15 min        | approx. 30 min         | approx. 45 min                  |                               |
| Triflex ProFibre                 | PMMA        | 10.00 kg                  | 3.00 kg/m <sup>2</sup>          | approx. 20 min        | approx. 30 min         | approx. 45 min                  |                               |
| Triflex ProPark                  | PMMA        | 25.00 kg                  | 3.00 kg/m <sup>2</sup>          | approx. 15 min        | approx. 1 hr           | approx. 1 hr                    | approx. 3 hrs                 |
| Triflex ProTect                  | PMMA        | 20.00 kg                  | 3.00 kg/m <sup>2</sup>          | approx. 15 min        | approx. 30 min         | approx. 45 min                  | approx. 2 hrs                 |
| Triflex ProTerra                 | PMMA        | 10.00 kg                  | 3.00 kg/m <sup>2</sup>          | approx. 15 min        | approx. 45 min         | approx. 1 hr                    | approx. 3 hrs                 |
| Triflex ProThan                  | PUR         | 25.00 kg                  | 3.00 kg/m <sup>2</sup>          | approx. 30 min        | approx. 2 hrs          | approx. 12 hrs                  |                               |
| Triflex ProThan Detail           | PUR         | 8.00 kg                   | 3.00 kg/m <sup>2</sup>          | approx. 30 min        | approx. 2 hrs          | approx. 12 hrs                  |                               |
| Triflex SmartTec                 | PUR         | 12,00 kg                  | 3.00 kg/m <sup>2</sup>          | approx. 60 min        | approx. 60 min         | approx. 8 hrs                   | approx. 2 days                |
| Triflex SmartTec Fibre           | PUR         | 3,50 kg                   | 3.00 kg/m <sup>2</sup>          | approx. 60 min        | approx. 60 min         | approx. 8 hrs                   | approx. 2 days                |
| Triflex Than R 557               | PUR         | 25.00 kg                  | 3.00 kg/m <sup>2</sup>          | approx. 30 min        |                        | approx. 12 hrs                  | approx. 2 days                |
| Triflex Than R 557 thix          | PUR         | 25.00 kg                  | 3.00 kg/m <sup>2</sup>          | approx. 30 min        |                        | approx. 7 hrs                   | approx. 3 days                |
| Triflex Towersafe                | PMMA        | 15.00 kg                  | 4.00 kg/m <sup>2</sup>          | approx. 15 min        | approx. 30 min         | approx. 45 min                  |                               |

## **Product information**

| Triflex products          | Resin base | Pack size <sup>1</sup> | Volume                      | Pot life <sup>2</sup> | Rainproof <sup>2</sup> | Can be<br>recoated <sup>2</sup> | Can be<br>loaded <sup>2</sup> |
|---------------------------|------------|------------------------|-----------------------------|-----------------------|------------------------|---------------------------------|-------------------------------|
| Coatings                  |            |                        |                             |                       |                        |                                 |                               |
| Triflex Cryl M 264        | PMMA       | 18.00 kg               | 4.00 kg/m <sup>2</sup>      | approx. 15 min        | approx. 20 min         | approx. 40 min                  | approx. 1 hr                  |
| Triflex DeckFloor         | PMMA       | 33.00 kg               | 4.00 kg/m <sup>2</sup>      | approx. 15 min        | approx. 30 min         | approx. 1 hr                    | approx. 2 hrs                 |
| Triflex Metal Coat        | -          | 20.00 kg               | 200-300 g/m <sup>2</sup>    |                       |                        | approx. 2 hrs                   | approx. 2 weeks               |
| Triflex ProDeck           | PMMA       | 33.00 kg               | 4.50 kg/m <sup>2</sup>      | approx. 15 min        | approx. 30 min         | approx. 1 hr                    | approx. 2 hrs                 |
| Triflex ProFloor          | PMMA       | 33.00 kg               | 4.00 kg/m <sup>2</sup>      | approx. 15 min        | approx. 30 min         | approx. 1 hr                    | approx. 2 hrs                 |
| Triflex ProFloor RS 2K    | PMMA       | 15.00 kg               | 4.00 kg/m <sup>2</sup>      | approx. 15 min        | approx. 30 min         | approx. 1 hr                    | approx. 2 hrs                 |
| Triflex ProFloor S1       | PMMA       | 33.00 kg               | 4.00 kg/m <sup>2</sup>      | approx. 15 min        | approx. 30 min         | approx. 1 hr                    | approx. 2 hrs                 |
| Triflex Than R 550        | PUR        | 8.00 / 25.00 kg        | 2.10 kg/m <sup>2</sup>      | approx. 30 min        |                        | approx. 12 hrs                  | approx. 2 days                |
| Triflex Than RG 568+      | PUR        | 30.00 kg               | 2.00 kg/m <sup>2</sup>      | approx. 30 min        |                        | approx. 18-36 hrs               | approx. 7 days                |
| Finishes                  |            |                        |                             |                       |                        |                                 |                               |
| Triflex Cryl Finish 202   | PMMA       | 10.00 kg               | 0.80 kg/m <sup>2</sup>      | approx. 15 min        | approx. 30 min         |                                 | approx. 2 hrs                 |
| Triflex Cryl Finish 205   | PMMA       | 10.00 kg               | 0.50-0.70 kg/m <sup>2</sup> | approx. 15 min        | approx. 30 min         |                                 | approx. 2 hrs                 |
| Triflex Cryl Finish 209   | PMMA       | 10.00 kg               | 0.50-0.70 kg/m <sup>2</sup> | approx. 15 min        | approx. 30 min         |                                 | approx. 2 hrs                 |
| Triflex Cryl Finish S1    | PMMA       | 10.00 kg               | 0.50-0.70 kg/m <sup>2</sup> | approx. 15 min        | approx. 30 min         | 1                               | approx. 2 hrs                 |
| Triflex Cryl Finish Satin | PMMA       | 10.00 kg               | 0.35 kg/m <sup>2</sup>      | approx. 15 min        | approx. 60 min         | 1                               | approx. 1 day                 |
| Triflex Pox Finish 173+   | EP         | 30.00 kg               | 0.60 kg/m <sup>2</sup>      | approx. 20 min        |                        | approx. 13–36 hrs               | approx. 5 days                |
| Triflex Than Finish 511   | PUR        | 8.00 kg                | 0.20 kg/m <sup>2</sup>      | approx. 45 min        | approx. 3 hrs          | approx. 12 hrs                  | approx. 7 days                |
| Triflex Towersafe Finish  | PMMA       | 10.00 kg               | 0.70 kg/m <sup>2</sup>      | approx. 15 min        | approx. 30 min         |                                 | approx. 2 hrs                 |
| Additional products       |            |                        |                             |                       |                        |                                 |                               |
| Triflex Colour Mix        | -          | 10.00 kg               | 1.00 kg/m <sup>2</sup>      |                       |                        |                                 |                               |
| Triflex Cryl M 266        | PMMA       | 18.00 kg               | 4.00 kg/m <sup>2</sup>      | approx. 15 min        | approx. 20 min         | approx. 40 min                  | approx. 1 hr                  |
| Triflex Cryl R 238        | PMMA       | 15.00 kg               | 1.85 kg/litres              | approx. 15 min        | approx. 30 min         |                                 | approx. 1 hr                  |
| Triflex Cryl R 239        | PMMA       | 5.00 kg                | 1.85 kg/litres              | approx. 15 min        | approx. 30 min         |                                 | approx. 1 hr                  |
| Triflex Cryl SC 237       | PMMA       | 15.00 kg               | 2.00 kg/m <sup>2</sup>      | approx. 15 min        | approx. 45 min         |                                 | approx. 2 hrs                 |
| Triflex FlexFiller        | PMMA       | 10.00 kg               | 2.20 kg/m <sup>2</sup> /mm  | approx. 15 min        | approx. 30 min         |                                 | approx. 3 hrs                 |
| Triflex Catalyst          | -          | 0.10 / 10.00 kg        | 2-6 %                       |                       |                        |                                 |                               |
| Triflex Micro Chips       | -          | 2.00 kg                | 0.05 kg/m <sup>2</sup>      |                       |                        |                                 |                               |
| Triflex ProDrain Fix      |            | 25.00 kg               | 3.00 kg/m <sup>2</sup>      | approx. 2 hrs         |                        |                                 |                               |
| Triflex Cleaner           | -          | 1 / 9 / 27 litres      | 0.20 litres/m <sup>2</sup>  |                       |                        |                                 |                               |
| Triflex Glass Cleaner     | -          | 0.75 litre             | 0.05 kg/m²                  |                       |                        | approx. 10 min                  |                               |
| Triflex Liquid Thixo      | -          | 1.00 litre             | 1 wt.%                      |                       |                        |                                 |                               |
| Triflex Powder Thixo      | -          | 1.00 / 5.00 kg         | 2–4 wt.%                    |                       |                        |                                 |                               |
| Triflex Stone Design R    | PUA        | 2.50 kg                | 1.30-1.70 kg/m <sup>2</sup> | approx. 15 min        | approx. 90 min         | approx. 5 hrs                   | approx. 12 hrs                |
| Triflex Stone Design S    | -          | 25.00 kg               | 13.00 kg/m <sup>2</sup>     |                       |                        |                                 |                               |



#### **Checking for cavities:**

Tap the existing concrete surface with a hammer and mark any areas that sound hollow.

#### Substrate – Inspections





Test the existing substrate with an electronic moisture meter to check and record the moisture content. This is a rapid, non-destructive process based on resistance measurement with electrodes.



# Testing the moisture content – method 2:

Test the existing substrate with a CM unit (calcium carbide method) to check and record the moisture content. This is a very accurate measuring process that involves taking a sample of the substrate.





# Triflex waterproofing and coating



## Substrate – Inspections



# Testing the compressive strength:

Use a Schmidt Hammer to test and record the compressive strength of the existing concrete area.



Testing the adhesive tensile strength:

Test the existing substrate using a Herion unit to ensure compliance with the stipulated adhesive tensile strength and record the results. Concrete: in the centre, at least 1.5 N/mm<sup>2</sup>.

individual value not less than 1.0 N/mm<sup>2</sup>. Screed: in the centre, at least 1.0 N/mm<sup>2</sup>. individual value not less than 0.7 N/mm<sup>2</sup>. Asphalt: in the centre, at least 0.8 N/mm<sup>2</sup>, individual value not less than 0.5 N/mm<sup>2</sup>.



# Determining the build-up:

Determine the build-up and each of the layer thicknesses by removing a core sample. Also determine the chloride content in the substrate by testing the core sample.



# Substrate – Pre-treatment



#### Mechanical pre-treatment – version 2:

Mechanical pre-treatment – version 1:

Strip the surface with a milling cutter to a depth of approx. 5 mm to obtain a sound substrate that offers good adhesion properties.

Strip the surface by means of Blastrac dust-free shotblasting to obtain a sound substrate that offers good adhesion properties.



#### Mechanical pre-treatment – version 3:

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Strip the surface by grinding with a diamond cup wheel to obtain a sound substrate that offers good adhesion properties.

# Triflex waterproofing and coating



Substrate

### Substrate - Pre-treatment



#### Mechanical pre-treatment – version 4:

Strip the surface of vertical areas by sand blasting to obtain a sound substrate that offers good adhesion properties.



Pre-treatment of nonabsorbent substrates, such as metals, PVC mouldings etc.:

(see substrate table, page 9) Prior to coating metals, the surface must be degreased with Triflex Cleaner and then roughened. (Alternatively, metals can be primed after degreasing with Triflex Metal Primer.)

If working on a larger area, use a grinding disc instead.





Smaller areas can be roughened using sandpaper.

#### Substrate - Pre-treatment



Important: Always observe the Triflex Cleaner evaporation time (approx. 20 minutes).

#### Pre-treatment of Triflex waterproofing/ coating:

The whole area must be pre-treated with Triflex Cleaner if work is interrupted for more than 12 hours or if it has rained during the waiting times.



Surface cleaning – version 1: Sweep the surfaces if they are very dirty or have been sanded.





## Substrate - Pre-treatment



# Surface cleaning – version 2:

Clean the surfaces with an industrial vacuum cleaner if they are very dirty or have been sanded.



#### **Cleaning of tools:**

Use Triflex Cleaner to clean the tools during waiting times and on completion of work.



## Mixing – 2C products with catalyst (PMMA)

Components:

Base resin, catalyst. When mixing, a clean underlay should be used (e.g.: PE sheet).

# 

Stir base resin thoroughly.



Pour out the amount required.



Important:

**Always ensure** 

adherence to the

mixing instructions on the container. If using partial quantities, these must be correctly calculated pro-rata in accordance with the mixing instructions.



## Mixing - 2C products with catalyst (PMMA)



Add the appropriate weight of Triflex Catalyst and stir until there are no more lumps (see mixing instructions on the container).



### Mixing – 3C products with catalyst (PMMA)

**Components:** 

Base resin, powder, catalyst. When mixing, a clean underlay should be used (e.g.: PE sheet).



Stir base resin thoroughly. Transfer to a large plastic bucket (30 l).



Then add the powder.



Important: **Always ensure** adherence to the mixing instructions on the container. If using partial quantities, these must be correctly calculated pro-rata in accordance with the mixing instructions.



## Mixing - 3C products with catalyst (PMMA)



And mix thoroughly with a slow-running mixing machine.



Add the Triflex Catalyst to the running mixing machine until there are no more lumps (see mixing instructions on the container).

Mixing

# Triflex waterproofing and coating



## Mixing – 2C products with hardener (EP/PUR)

• Important: Always ensure adherence to the mixing instructions on the container. If using partial quantities, these must be correctly calculated pro-rata in accordance with the mixing instructions. Combination drum: Base resin, hardener (in the lid) Normal container: Base resin, hardener. When mixing, a clean underlay should be used (e.g.: PE sheet).



Combination drum:

Pierce the lid with a sharp object so that the hardener empties completely into the base resin.





Then stir contents thoroughly and transfer to another container.



## Mixing – 2C products with hardener (EP/PUR)



#### Normal container:

Pour the hardener into the base resin container. The materials in the container generally correspond to the mixing ratio required. If using smaller amounts, the components must be stirred prior to mixing.



Thoroughly stir the materials with a mixing machine.



# Transfer to another container:

The mixed materials (also from the combination drums) must be transferred to another container and then stirred again.



## Priming



Apply primer to vertical surfaces and details first. It is applied with a heated roller to form a film layer.

Apply adhesive tape to connections and details.





Apply primer to horizontal surfaces evenly with a universal roller to form a film layer.

Important: Always ensure that

## Priming



Then cross-coat evenly.



#### Version:

Depending on the version, it may be necessary to dress the fresh primer with quartz sand.

Important: Refer to the system description to see if the primer must be dressed.





The adhesive tape can be removed immediately.



## Repairing – Small repairs with paste

Important: Always ensure that the materials in the container are thoroughly mixed (see page 18 ff.). The substrate must already be primed.

overlapping.

Apply paste to the primed substrate or the fleece overlaps.



Repairing

Important: Paste can also be used to level out any fleece Smooth over with a smoothing trowel.



## Repairing - Large repairs with mortar



Remove any loose substrate.



Important: Always ensure that the materials in the container are thoroughly mixed (see page 18 ff.).



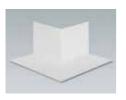
After priming, fill any repair points and areas of damage with mortar.



## Detail waterproofing - Wall junction

Fleece cut-outs are an excellent alternative for the quick and easy detail waterproofing of inner and outer corners. Apply adhesive tape to the wall junction at waterproofing height.





Important: Always prepare all fleece cut-outs prior to mixing the materials in the container (see page 18 ff.). Prepare Triflex Special Fleece cut-outs for inner and outer corners: Make a circular fleece

and outer corners: Make a circular fleece cut-out (approx. Ø 10 cm) with one incision through to the centre.



Important: A sufficient amount has been applied if the fleece is fully saturated. If the fleece is not fully saturated, lift it off and apply another generous coating.

#### Outer corner: Apply waterproofing resin generously with a brush or heated roller and lay the pre-cut inner corner ensuring there are no air bubbles.





## Detail waterproofing - Wall junction



Then apply a thick layer of waterproofing resin on top of the outer corner fleece.



#### Inner corner:

Apply waterproofing resin generously with a brush or heated roller and lay the pre-cut inner corner ensuring there are no air bubbles.



Then apply a thick layer of waterproofing resin on top of the inner corner fleece.

Important: Make sure that there are no dry patches when overlapping the fleece.



## Detail waterproofing - Wall junction



Either pre-cut the Triflex Special Fleece or apply straight from the roll onto the fresh resin ensuring there are no air bubbles. Make sure the fleece is fully saturated.

Apply a generous layer of

waterproofing resin with a heated roller to the wall

junction area.



In the case of inner corners, lay the fleece approx. 5 cm around the corner and cut diagonally into the creased fleece on the floor right up to the corner.

Overlap the cut fleece, making sure that there are no dry patches.



Important: To ensure proper saturation of the fleece, this initial coating should be applied to no more than 2 meters at a time. Then lay the fleece and apply another generous coating immediately.



## Detail waterproofing - Wall junction



In the case of outer corners, lay the fleece around the corner approx. 5 cm and then cut diagonally into the fleece on the floor up to the corner.

Then fold the incision around the corner and cover the free floor space with an additional piece of fleece.

Then cover the laid fleece with a generous layer of waterproofing resin.





The adhesive tape can be removed immediately.

Fleece cut-outs are an excellent alternative for the quick and easy detail waterproofing of pipe penetrations.

Apply adhesive tape at sealing height and on area surrounding the ventilator (min. 10 cm).





Prepare Triflex Special Fleece cut-outs.

#### Pipe:

Fleece width: 20 cm, Fleece length: pipe circumference +5 cm. Make incisions along the entire length of the fleece. These incisions should be 5 cm deep and 1 cm wide. Surrounding surface area:

Cut 2 pieces of fleece in a U shape to fit around the pipe circumference. Cut the fleece pieces so that they overlap around the pipe by at least 5 cm.

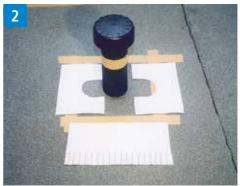
Apply a generous layer of waterproofing resin with a heated roller or brush to the pipe and to the surrounding area.

Then apply the fleece cut-out to the fresh resin around the pipe, making sure that there are no air bubbles and that the fleece is sufficiently saturated.

Apply a generous coating to the fleece and the overlaps.

## Detail waterproofing - Ventilator







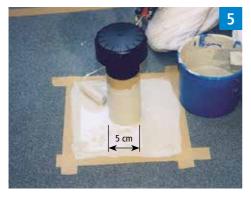


## Detail waterproofing - Ventilator



Apply waterproofing resin to the surrounding surface area, lay the first surface fleece cut-out, making sure there are no air bubbles, and apply another generous coat of resin.

Important: Always prepare all fleece cut-outs prior to mixing the materials in the container (see page 18 ff.).



Apply further waterproofing resin to the surrounding area and repeat the process with the second fleece cut-out.

Important: The first and second fleece cut-out must overlap by at least 5 cm.



The adhesive tape can be removed immediately.

X

Important: Always prepare all fleece cut-outs prior to mixing the materials in the container (see page 18 ff.). Apply adhesive tape to create sealing border around the gully and plug it up with a cleaning cloth.

Clean the gully with Triflex Cleaner and roughen the surface with sandpaper.

## Detail waterproofing - Gully





Prepare Triflex Special Fleece cut-outs.

#### Gully:

Fleece width: 15 cm, Fleece length: gully circumference +5 cm. Make incisions along the entire length of the fleece. These incisions should be 5 cm deep, 1 cm wide and star-shaped. Surrounding surface area:

1 piece of fleece with star-shaped incisions in the centre to match diameter of the gully.





## Detail waterproofing - Gully



This is how the fleece is later inserted in the gully.



Apply a generous layer of waterproofing resin in and around the gully and lay the fleece cut-out for the gully, making sure there are no air bubbles.

Then place the star-shaped incisions on the surrounding area and apply another generous coating of resin.



Apply a generous layer of waterproofing resin to the area in and around the gully.

# Triflex waterproofing and coating





Lay fleece for the surrounding area, making sure there are no air bubbles, and use a brush to place the star-shaped incisions in the gully.

Apply a further generous layer of resin.





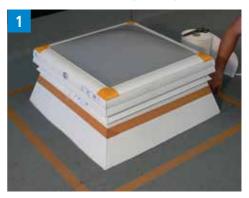
Remove the cloth from the gully and immediately remove the adhesive tape.

Done!



Important: Always prepare all fleece cut-outs prior to mixing the materials in the container (see page 18 ff.). Apply adhesive tape at sealing height and on the area surrounding the light dome (min. 10 cm).

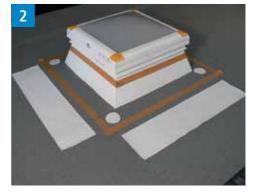
#### Detail waterproofing - Light dome



Prepare Triflex Special Fleece cut-outs.

#### **Corners:**

Make 4 circular fleece cut-outs (approx. Ø 10 cm) with one incision through to the centre. **Surrounding surface area:** Make 4 fleece cut-outs that are the same length as the area to be waterproofed. Cut the fleece pieces so that they overlap around the base by at least 5 cm.





#### Corners:

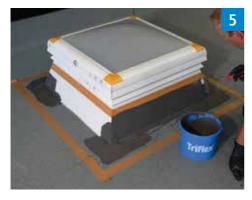
Apply waterproofing resin generously with a brush or heated roller and lay the pre-cut outer corner ensuring there are no air bubbles.



#### Detail waterproofing - Light dome



Then apply another thick layer of waterproofing resin to the outer corner fleece.



Surrounding surface area: Apply waterproofing

resin to the surrounding surface area.



Lay the fleece cut-out for the surrounding area making sure that there are no air bubbles.



#### Detail waterproofing - Light dome



For the outer corners, the fleece is carried around the corner at least 5 cm and the fleece on the floor diagonally cut into up to the corner.

Then fold the incision around the corner. Lay the fleece on the surrounding area making sure that there are no air bubbles and apply another generous coat of resin.





Apply a generous layer of waterproofing resin for the next partial area.

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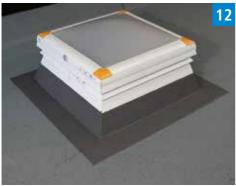
### Detail waterproofing - Light dome



Lay the fleece cut-out for the surrounding area making sure that there are no air bubbles, cut into the fleece diagonally and lay around the corners.



Then apply another thick layer of waterproofing resin to the fleece.



The adhesive tape can be removed immediately.



### Detail waterproofing - Light dome

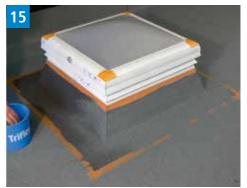


If the waterproofing needs to match the surrounding area, the surface can be dressed with slate chippings.

For this purpose, apply another layer of waterproofing resin.







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### Detail waterproofing - Light dome



The adhesive tape can be removed immediately.



Once the resin has cured, remove any excess slate chippings.



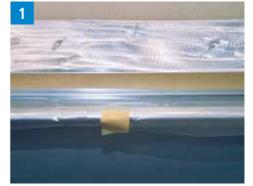
#### Detail waterproofing - Eaves edge finishing

Important: Always prepare all fleece cut-outs prior to mixing the materials in the container (see page 18 ff.). Tape off the inside of the gutter and degrease the eaves junction with Triflex Cleaner.

Then roughen the surface with sandpaper or a grinder.

(Alternatively, metals can be primed after degreasing with Triflex Metal Primer.)

> Apply waterproofing resin generously with a heated roller.







Detail waterproofing

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Important: To ensure proper saturation of the fleece, this initial coating should be applied to no more than 2 meters at a time. Then lay the fleece and apply another generous coating immediately.

> Then lay cut sections or rolled strips of Triflex Special Fleece in the wet resin, making sure that the fleece is fully saturated and that there are no air bubbles.



### Detail waterproofing - Eaves edge finishing



Then apply another thick layer of waterproofing resin to the fleece.



Remove the adhesive tape and sheet while the resin is still wet.



#### Detail waterproofing - Newel post with leading edge

Important: Always prepare all fleece cut-outs prior to mixing the materials in the container (see page 18 ff.). Apply adhesive tape to the newel post and the area to be waterproofed.



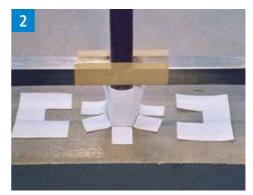
Prepare Triflex Special Fleece cut-outs.

#### Post:

Fleece width: junction height +5 cm Fleece length: 5 x post width 4 incisions as wide as the post, each 5 cm deep. Surrounding surface area:

Cut 2 pieces of fleece in a U shape to fit around the post circumference. Cut the two fleece pieces so that they overlap around the post by at least 5 cm.

> Apply a generous layer of waterproofing resin with a heated roller or brush to the post and surrounding area.

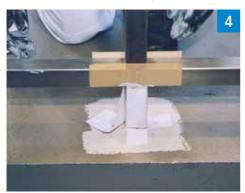




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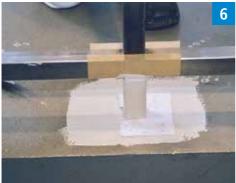
### Detail waterproofing - Newel post with leading edge



Then lay cut sections of fleece for the post in the wet resin, making sure that the fleece is fully saturated and that there are no air bubbles.



Apply another thick layer of waterproofing resin to the fleece.



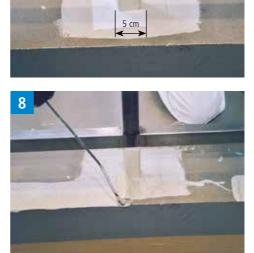
Apply a layer of waterproofing resin to the surrounding area and lay the first section of fleece, making sure there are no air bubbles.



#### Detail waterproofing - Newel post with leading edge

Important: The first and second fleece cut-out must overlap by at least 5 cm. Apply a generous layer of resin to the first fleece cut-out and lay the second fleece cut-out for the surrounding area making sure that there are no air bubbles. Then apply a generous layer of resin to the second fleece cut-out. Remove the adhesive tape from the post.

> Apply waterproofing resin to the front area of the edge.



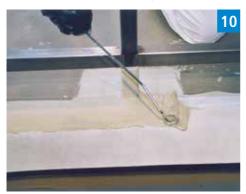


Lay cut sections or rolled strips of fleece so that there are no air bubbles and paying attention to the depth of the flashing at the leading edge.

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### Detail waterproofing - Newel post with leading edge



Then apply another thick layer of waterproofing resin to the fleece.



Fold the fleece back on the surface area.



Apply a generous layer of waterproofing resin to the underside.

#### Detail waterproofing - Newel post with leading edge

Fold the coated fleece down over the leading edge.



Use a roller to smooth out the fleece so that there are no air bubbles and apply another generous layer of waterproofing resin.



Finally, remove the adhesive tape from the leading edge while the resin is still wet.



Detail waterproofing



### Detail waterproofing - Newel post with leading edge





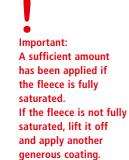
Apply a generous layer of waterproofing resin.

#### Surface waterproofing



Use a lambskin roller to smooth out evenly.





Lay the Triflex special fleece in the wet resin, making sure that the fleece is fully saturated and that there are no air bubbles.



Important: Always ensure that the materials in the container are thoroughly mixed (see page 18 ff.).



### Surface waterproofing



Cover the laid fleece with enough resin – wet on wet – to ensure full saturation.



Remove any air bubbles by working the roller out towards the side.



Apply the waterproofing resin for the second length of fleece and again spread it evenly.



Important: The strips of fleece must overlap by at least 5 cm. Lay the second length of fleece, making sure there are no air bubbles.

#### Surface waterproofing



Cover the fleece again with enough resin – wet on wet – to ensure full saturation.

Remove any air bubbles by working the roller out towards the side.







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### Triflex waterproofing and coating



#### Surface waterproofing – Wearing layer

Apply a generous layer of resin to the surface area.

Important: Refer to the system description to see if a wearing layer is required. Always ensure that the materials in the container are thoroughly mixed (see page 18 ff.).

Use a lambskin roller to smooth out evenly.







• Important: Refer to the system description to see if the surface requires dressing. Version: Depending on the waterproofing or coating system used, it may be necessary to dress the fresh wearing layer with quartz sand.





### Surface waterproofing – Wearing layer



After the resin has cured, remove any excess quartz sand.



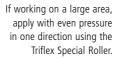
Pour the coating resin on the surface area.

#### Surface coating



If working on a small area, smooth the area over evenly with a smoothing trowel without exerting excessive pressure.







#### Important: Always ensure that the materials in the container are thoroughly mixed (see page 18 ff.).



### Surface coating



#### Version:

Depending on the coating system used, it may be necessary to dress the wet coating with quartz sand.





Once the surface is cured, remove any excess quartz sand.

#### Finish – "Smooth" or "Non-slip" surface

Important: Always ensure that the materials in the container are thoroughly mixed (see page 18 ff.). Apply adhesive tape to all transitions before starting work.



Important: In the case of vertical surfaces, add Triflex Liquid Thixo in order to make the finish thixotropic. Apply finish resin (incl. Triflex Liquid Thixo) to the vertical areas using a radiator roller or brush.



Remove the adhesive tape immediately.





### Finish - "Smooth" or "Non-slip" surface



Apply the finish resin (without Triflex Liquid Thixo) to the surface and cross-coat by using a Triflex finish roller.





Apply adhesive tape to all transitions before starting work.

### Finish – "Chips Design" surface



Important: In the case of vertical surfaces, add Triflex Liquid Thixo in order to make the finish thixotropic.

Important: Always ensure that the materials in the container are thoroughly mixed (see page 18 ff.).

> Apply finish resin (incl. Triflex Liquid Thixo) to the vertical areas using a radiator roller or brush.



Use a funnel spray gun to blow the Triflex Micro Chips onto the wet finish on the vertical areas.



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#### Finish – "Chips Design" surface



Remove the adhesive tape immediately.



Remove the excess Triflex Micro Chips before applying the surface finish.



Apply finish resin (without Triflex Liquid Thixo) to floor areas by using a Triflex finish roller.

The roller holder should always point towards the already completed wall junction in order to prevent soiling of this completed section.



### Finish – "Chips Design" surface



Smooth over by cross-coating.

Use a funnel spray gun to blow the Triflex Micro Chips onto the wet finish on the floor area.







Finish – "Colour Design" surface





Important: In the case of vertical surfaces, add Triflex Liquid Thixo in order to make the finish thixotropic.

Important: Always ensure that the materials in the container are thoroughly mixed (see page 18 ff.).

> Apply finish resin (incl. Triflex Liquid Thixo) to the vertical areas using a radiator roller or brush.

Apply adhesive tape

to all transitions before starting work.

# 2 ing a rush.

Remove the adhesive tape immediately.





#### Finish – "Colour Design" surface



Apply finish resin (without Triflex Liquid Thixo) to floor areas by using a Triflex finish roller.

The roller holder should always point towards the already completed wall junction in order to prevent soiling of this completed section.

Smooth over by cross-coating.







Use a funnel spray gun with special attachment to apply a generous layer of Triflex Colour Mix to the still-wet finish.



### Finish – "Colour Design" surface



After the Triflex Cryl Finish 205 has cured (approx. 2 hours), carefully brush off any surplus Triflex Colour Mix. It is essential to ensure that the surface is kept free of any contaminants (e.g., dirty footwear, tools, etc.).

After waiting a further hour, the prepared surface is finished by cross-coating with Triflex Cryl Finish Satin.



Then remove the adhesive tape.





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Important: Always ensure that the materials in the container are thoroughly mixed (see page 18 ff.). Cross-coat the floor area with finish resin by using a Triflex finish roller.

### Finish – "Dressing, fine" surface



Dress the wet finish with plenty of quartz sand (grain size 0.2–0.6 mm).



After the finish has cured, brush off any surplus quartz sand.



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### Finish – "Dressing, fine" surface



Or vacuum off with an industrial vacuum cleaner.



Then finish the flashing and surfaces by applying a "Smooth" or "Chips Design" surface.

Important: Follow the further application steps on page 60 or 62.

### Finish – "Dressing, coarse" surface



The last completed layer has already been dressed with quartz sand. (see page 56 or 59)



Brush off any surplus quartz sand.

Or vacuum off with an industrial vacuum cleaner.



## Triflex waterproofing and coating Instructions for use



## Finish – "Dressing, coarse" surface



Then finish the flashing and surfaces by applying a "Smooth" or "Chips Design" surface.





| Work step                           | Problem  | Possible cause  | Solution   |
|-------------------------------------|--|---|--|
| Primer                              | Primer fails to cure (throughout)                        | <ul> <li>No catalyst or too little catalyst<br/>added</li> <li>Layer of applied primer is<br/>too thin</li> </ul>   | Remove primer     Apply new primer with catalyst     Ensure compliance with the volume required per m <sup>2</sup> !                             |
|                                     | Patches of primer fail to cure<br>(isolated wet patches) | <ul> <li>Mixing error</li> <li>Insufficient pre-treatment of<br/>substrate (residual substances<br/>that adversely affect<br/>performance)</li> </ul>       | Remove the primer and clean<br>with Triflex Cleaner, observing the<br>evaporation time     Abrade the substrate carefully     Re-apply primer    |
|                                     | Defective areas in the primer coating (film incomplete)  | Primer not applied by cross-coating   | <ul> <li>Immediately reapply primer to<br/>defective areas wet on wet</li> </ul>   |
|                                     | Primer lifting at the edges                              | Layer of applied primer is too thick  | <ul> <li>Remove all loose particles</li> <li>Re-apply primer to defective areas</li> </ul>   |
|                                     |  | Substrate not sound   | <ul><li>Remove all loose particles</li><li>Re-apply primer to defective areas</li></ul>  |
|                                     | Lumps formed on the primed surface                       | Primer applied after the end     of pot life  | <ul> <li>Remove any lumps with a trowel or<br/>by abrading</li> <li>Re-apply primer to defective areas</li> </ul>                                |
| Primer with quartz sand<br>dressing | Quartz sand has not bonded in<br>places                  | <ul> <li>Insufficient material applied</li> <li>Quartz sand dressing applied<br/>too late</li> <li>Insufficient quartz sand dressing<br/>applied</li> </ul> | <ul> <li>Mechanically roughen defective<br/>areas</li> <li>Re-prime and sand down defective<br/>areas</li> </ul>                                 |
| Levelling with paste                | Paste fails to cure                                      | No catalyst or too little catalyst<br>added   | Mechanically remove paste     Clean defective areas with     Triflex Cleaner, observing     the evaporation time     Re-apply paste              |
| Levelling with mortar               | Mortar fails to cure (throughout)                        | No catalyst or too little catalyst<br>added   | Mechanically remove mortar     Clean defective areas with     Triflex Cleaner, observing     the evaporation time     Re-apply mortar            |
|                                     | Patches of mortar fail to cure<br>(isolated wet patches) | <ul> <li>Mixing error</li> <li>Insufficient pre-treatment of<br/>substrate (residual substances<br/>that adversely affect<br/>performance)</li> </ul>       | Mechanically remove mortar, clean<br>with Triflex Cleaner, observing the<br>evaporation time<br>If necessary, re-apply primer<br>Re-apply mortar |
|                                     | Lips or trowel marks in mortar                           | <ul> <li>Processed too late</li> <li>Unevenly applied</li> <li>Not levelled with the spiked roller</li> </ul>   | <ul> <li>Mechanically remove lips</li> <li>If necessary, add additional coating<br/>or level out any unevenness</li> </ul>                       |



| Work step     | Problem  | Possible cause   | Solution   |
|---------------|--|--|--|
| Waterproofing | Waterproofing fails to cure                        | <ul> <li>No catalyst or too little catalyst<br/>added</li> <li>Resin layer underneath the<br/>fleece too thin</li> </ul>   | <ul> <li>Completely remove the<br/>waterproofing</li> <li>Clean area with Triflex Cleaner,<br/>observing the evaporation time</li> <li>Mechanically roughen substrate</li> <li>Re-apply primer to substrate</li> <li>Re-apply waterproofing</li> </ul>                                 |
|               | Blistering in the waterproofing                    | <ul> <li>Air bubbles – fleece is not correctly smoothed down</li> <li>Insufficient resin in places</li> <li>Mixing error</li> <li>Patches in the primer</li> </ul> | <ul> <li>Lance bubbles</li> <li>Remove any material that has failed<br/>to cure</li> <li>Clean area with Triflex Cleaner and<br/>observe the evaporation time</li> <li>Mechanically roughen substrate</li> <li>Re-apply primer to substrate</li> <li>Re-apply waterproofing</li> </ul> |
|               | Waterproofing peeling away from substrate          | Insufficient resin applied   | Completely remove waterproofing<br>and material that has failed to cure     Clean area with Triflex Cleaner and<br>observe the evaporation time     Mechanically roughen substrate     Re-apply primer to substrate     Re-apply waterproofing   |
|               | Waterproofing has cured,<br>but is extremely tacky | Processing temperatures too low<br>or too high   | Clean area with Triflex Cleaner and<br>observe the evaporation time  |

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| Work step     | Problem  | Possible cause  | Solution   |
|---------------|--|---|--|
| Wearing layer | Wearing layer fails to cure<br>(throughout)                  | <ul> <li>No catalyst or too little catalyst<br/>added</li> </ul>  | <ul> <li>Mechanically remove entire wearing<br/>layer</li> <li>Clean area with Triflex Cleaner and<br/>observe the evaporation time</li> <li>Apply new wearing layer</li> </ul>  |
|               | Patches of wearing layer fail to cure (isolated wet patches) | Mixing error  | <ul> <li>Remove any material that has failed<br/>to cure</li> <li>Clean area with Triflex Cleaner and<br/>observe the evaporation time</li> <li>Re-apply wearing layer to affected<br/>areas</li> </ul>  |
|               | Wrinkles in wearing layer<br>(irregularities in the surface) | <ul> <li>Layer of applied waterproofing<br/>is too thin</li> <li>Not fully cured</li> </ul>   | Completely remove waterproofing<br>and any material that has failed to<br>cure from the wearing layer     Clean area with Triflex Cleaner and<br>observe the evaporation time     Mechanically roughen substrate     Re-apply primer to substrate     Apply waterproofing     Re-apply wearing layer |
|               | Wearing layer is cured,<br>but is extremely tacky            | <ul> <li>Processing temperatures too low<br/>or too high</li> </ul>   | Clean area with Triflex Cleaner and observe the evaporation time   |
|               | Quartz sand has not bonded in places                         | Quartz sand dressing applied<br>too late     Layer of applied wearing layer<br>is too thin     Insufficient quartz sand dressing<br>applied | <ul> <li>For aesthetic purposes, abrade in<br/>straight sections</li> <li>Re-apply the wearing layer and<br/>sand down</li> </ul>  |

| Work step | Problem  | Possible cause   | Solution  |
|-----------|--|--|---|
| Coating   | Coating fails to cure (throughout)                         | <ul> <li>No catalyst or too little catalyst<br/>added</li> </ul>   | <ul> <li>Mechanically remove entire coating</li> <li>Clean area with Triflex Cleaner and<br/>observe the evaporation time</li> <li>Re-apply coating</li> </ul>  |
|           | Patches of coating fail to cure<br>(isolated wet sections) | Mixing error   | <ul> <li>Remove any material that has failed<br/>to cure</li> <li>Clean area with Triflex Cleaner and<br/>observe the evaporation time</li> <li>Re-apply coating to affected areas</li> </ul>   |
|           | Wrinkles in coating<br>(irregularities in the surface)     | <ul> <li>Layer of applied coating is<br/>too thin</li> <li>Not fully cured</li> </ul>  | <ul> <li>Remove any material that has failed<br/>to cure</li> <li>Clean area with Triflex Cleaner and<br/>observe the evaporation time</li> <li>Mechanically roughen substrate</li> <li>Re-apply primer to substrate</li> <li>Re-apply coating</li> </ul> |
|           | Coating is cured,<br>but is extremely tacky                | Processing temperatures too low<br>or too high   | Clean area with Triflex Cleaner and<br>observe the evaporation time   |
|           | Lips or trowel marks in the coating!                       | <ul> <li>Processed too late</li> <li>Unevenly applied</li> <li>Not levelled with the spiked roller</li> </ul>                                | <ul> <li>Mechanically remove lips</li> <li>If necessary, add additional coating<br/>or level out any unevenness</li> </ul>  |
|           | Quartz sand has not bonded in places                       | <ul> <li>Quartz sand applied too late</li> <li>Layer of applied coating is<br/>too thin</li> <li>Insufficient quartz sand applied</li> </ul> | <ul> <li>For aesthetic purposes, abrade in straight sections</li> <li>Re-apply the coating and sand down</li> </ul>   |

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| Work step | Problem   | Possible cause   | Solution   |
|-----------|---|--|--|
| Finish    | Patches of finish have failed to cure<br>(isolated wet patches)     | Mixing error   | <ul> <li>Remove any material that has failed<br/>to cure</li> <li>Clean area with Triflex Cleaner and<br/>observe the evaporation time</li> <li>Completely re-apply finish to<br/>whole area</li> </ul>                        |
|           | Defective areas in the finish<br>(no continuous film in some areas) | <ul> <li>Finish not applied by<br/>cross-coating</li> </ul>  | <ul> <li>Re-finish defective areas</li> <li>For aesthetic purposes, the finish<br/>usually needs to be re-applied to<br/>the whole area</li> </ul>   |
|           | Wrinkles in finish  | <ul> <li>Wearing layer not fully cured</li> </ul>  | <ul> <li>Remove any material that has failed to cure</li> <li>Remove wearing layer by abrading</li> <li>Clean area with Triflex Cleaner and observe the evaporation time</li> <li>Re-apply wearing layer and finish</li> </ul> |
|           | Pigment leaching out of vertical structural components              | <ul> <li>Non-slump properties of finish<br/>insufficient</li> <li>No Triflex Liquid Thixo added</li> </ul> | <ul> <li>Clean area with Triflex Cleaner and<br/>observe the evaporation time</li> <li>Re-apply finish mixed with Triflex<br/>Liquid Thixo to entire area</li> </ul>   |
|           | Air bubbles appear in the finish during application                 | Layer of applied finish is too thick   | Roll the finish out so that it is thinner  |

# Triflex waterproofing and coating Instructions for use

| Work step                            | Problem  | Possible cause   | Solution  |
|--------------------------------------|--|--|---|
| Finish<br>"Chips Design"<br>surface  | Micro Chips protruding too far out<br>of the finish (impedes cleaning) | Layer of applied finish is too thin     Micro Chips blown on too late                                  | <ul> <li>Abrade finish</li> <li>Clean the area with Triflex Cleaner<br/>and observe the evaporation time</li> <li>Apply finish in accordance with<br/>recommended volumes</li> <li>Blow the Micro Chips on the wet<br/>finish</li> </ul>  |
| Finish<br>"Colour Design"<br>surface | Lips and ridges in the surface   | Layer of applied finish is too thin     Colour Mix blown on too late                                   | <ul> <li>Abrade finish</li> <li>Clean the area with Triflex Cleaner<br/>and observe the evaporation time</li> <li>Apply finish in accordance with<br/>recommended volumes</li> <li>Blow Colour Mix on the still-wet<br/>finish</li> </ul> |
|                                      | "Clouding" on the surface  | <ul> <li>Funnel spray gun used without<br/>attachment</li> <li>Colour Mix blown on too late</li> </ul> | <ul> <li>Abrade finish</li> <li>Clean the area with Triflex Cleaner<br/>and observe the evaporation time</li> <li>Apply finish in accordance with<br/>recommended volumes</li> <li>Blow Colour Mix on the still-wet<br/>finish</li> </ul> |
|                                      | Streaking in transparent finish  | <ul> <li>Finish not applied by cross-coating</li> <li>No finish roller used</li> </ul>                 | <ul> <li>Abrade finish</li> <li>Clean the area with Triflex Cleaner<br/>and observe the evaporation time</li> <li>Completely re-apply surface<br/>in compliance with technical<br/>guidelines</li> </ul>                                  |



## Triflex waterproofing and coating Instructions for use

## **Disposal**

If you have any quantities left over, or should it be necessary to remove Triflex waterproofing or coating, these products, in their fully reacted state, can be treated as normal construction site mixed waste and disposed of at a general waste dump.

Regional waste management companies should refer to the EAK disposal codes (European Waste Catalogue) as defined in the relevant EC safety data sheets.

The used and emptied steel packaging may be delivered to all KBS GmbH acceptance and recycling points.

For further information on the KBS system and all recycling points where you can dispose of your Triflex steel containers free of charge within the framework of the "KBS techPack" license, please visit the internet site www.kbsrecycling.de.



## **Environmentally friendly**

There may be a slight odour problem when working with Triflex PMMA resin. Depending on ambient conditions, such as outdoor temperature and direction of wind, it is also possible that the ventilation system may convey odours to adjoining rooms during refurbishment work.

In co-operation with the water protection board, the trade supervisory board and the public health authority, measurements were taken during the application of Triflex resins, as well as in-house measurements. The results are in compliance with legal requirements, i.e. the test readings verified that the measured values were below the statutory provisions of the AGW (workplace limit values).

The results derived from these series of measurements demonstrate that not only are Triflex PUR and Triflex PMMA resins great for dealing with all kinds of problems encountered during complex refurbishments, they also don't pose a health risk during application – provided contractors ensure adherence to the relevant safety instructions.

However, due to the very low odour threshold values of monomers, Triflex does not recommend the use of PMMA resins for indoor applications. If indoor application is unavoidable, contractors must always ensure that the work area is subject to forced ventilation with a minimum 7-fold air exchange per hour. In cases where AGW workplace limit values are exceeded, contractors should always wear protective masks during application. The provisions of EC safety data sheets also apply.

Once fully cured, the resins achieve their full mechanical properties and odours will disappear.

### Triflex waterproofing and coating Instructions for use

## Care and maintenance

## The care procedures apply to the following Triflex systems:

Triflex BTS-P – Balcony waterproofing system Triflex BFS – Balcony flooring system Triflex Creative Design – Surface design Triflex Stone Design – Surface design Triflex TSS – Stair coating system

#### Cleaning and care

Only use standard floor cleaning and care products diluted in accordance with the instructions. If cleaned regularly, the floor can be cleaned with a standard broom and then wiped with a mop. Alternatively, you can also use a squeegee with a rubber lip.

#### **Cleaning Triflex Stone Design**

Triflex Stone Design is a high-quality surface that requires intensive care to preserve its appearance. We recommend using high-pressure/surface cleaners (such as the FRV 30 from Kärcher) with a maximum pressure setting of 30 bar.

#### Unsuitable care products and procedures

Do not clean using hard metal objects or high-pressure cleaning units. Disinfectants or corrosive cleaning agents used as sanitary ware are also unsuitable. Test the selected cleaning products on a small area before attempting to clean the entire area.

Triflex Beschichtungssysteme GmbH & Co. KG reserves the right to inspect cleaning procedures in the field. Cleaning procedures that do not comply with this data sheet may render the Triflex warranty null and void.

All technical advice on the maintenance and care of our products is based on extensive research. However, due to the diverse conditions of application, tests should be carried out to ensure that all products are suitable for the respective purpose.

#### Textile coverings

Please note that installed textile coverings (carpets, artificial grass, doormats, etc.) may lose their softness. While this does not have a negative impact on the sealing ability of the product, it may lead to a change in colour of the surface.

#### Plant and leaf remnants

Any plant and leaf remnants should be regularly removed from Triflex coverings because if left to rot, they can produce tannins, which may lead to discolouration of the surface.

#### Wet pearl effect

During the curing of Triflex products, the surface releases paraffin. This may impede the proper drainage of rainwater (formation of small puddles). After approx. 6 months, the paraffin has weathered and rainwater will drain properly if there is sufficient gradient.

#### Winter care

All Triflex systems are resistant to de-icing salt. Because of the grinding effect, grit and granulate must not be used on Triflex systems.

#### Damage

Always take steps to prevent damage from mechanical/ thermal influences (such as naked flames or burning embers) as any such damage may have a lasting adverse effect on Triflex multi-layer systems. Subsequent perforations by cable channels or dowels can also destroy the product's sealing capability. Chair and table legs should be fitted with felt pads/furniture gliders to prevent scratch marks.

Subject to changes without notice in the interests of technical advancement or enhancement of our products.

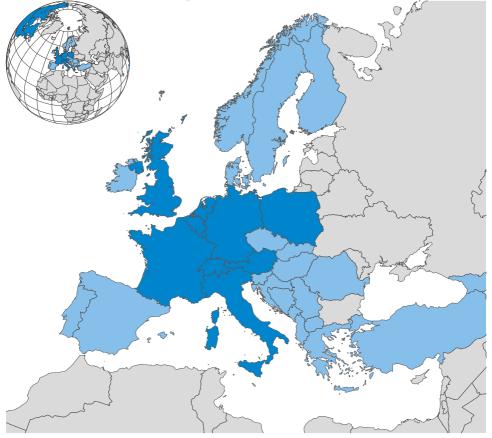


Triflex waterproofing and coating Instructions for use



## Triflex waterproofing and coating Instructions for use

## **Triflex International**



Triflex National

International

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