

Triflex

Delivering solutions together.

Finishing system for bridges

Triflex Bridge Deck



APPLICATION
ON BRIDGES
WITH
TRIFLEX SAM



Machine technology as a game-changer for liquid applied waterproofing.

Challenging engineering structures such as bridges regularly present planners, contractors and operators with a variety of challenges. Both in new builds and refurbishment, the choice of building materials and application methods of application to be used are influenced by factors such as accelerated construction progress and extended service life.

Concrete remains the medium of choice in bridge construction due to its many advantages. Along with these advantages, the question of moisture protection should not be overlooked. The choice of suitable and approved waterproofing systems is key here.

Triflex is a pioneer in the field of PMMA-based bridge finishing systems with the introduction of our innovative **Spray Application Machine (SAM)**.

Our solutions for bridge finishing and Triflex SAM are outlined on the following pages to make it easier for you to choose the right products.

Speak with us.



Table of contents

More than 45 years of experience, completely universal	4
Strong together – delivering solutions together	4
Triflex SAM for bridges	5
Who is SAM?	5
Triflex Bridge Deck finishing system	5
How is Triflex SAM designed?	6
How is Triflex SAM controlled?	7
Triflex Bridge Deck system build-up	8
Triflex Bridge Deck system components	10
What are the advantages of Triflex SAM?	11
Triflex International	12



Triflex waterproofing technology

More than 45 years of experience, completely universal.

As a leading European specialist for PMMA liquid applied waterproofing, there is one thing we have learnt over the past 45 years: having an outstanding product is not enough to solve problems permanently. Triflex, a family company, takes a different approach: we always solve problems together. Involving manufacturers at an early stage and cooperating to develop solutions leads to numerous synergies in the planning and construction process.

Everyone benefits from the successful interaction of contractors, planners and Triflex employees, cooperations with manufacturers and of course our high-quality product solutions.

Projects

Your project is our project: We have the perfect solution for every requirement. We support you with planning and with consultation before, during and after the execution of your project. Because we are only satisfied when you are.

Preparation

Your planning, our partners: Triflex partners are regularly trained and advised by ourselves, thus guaranteeing you the highest possible reliability for the execution of your project.



**STRONG
TOGETHER
DELIVERING
SOLUTIONS
TOGETHER.**

System solutions

Your problem, our solutions: We have the perfect PMMA system for every challenge: easy to apply at temperatures down to 0 °C, rapidly resistant, durable, wear-resistant, waterproof. When it comes to maintaining infrastructure, Triflex is the partner to choose.

Service

Triflex is a manufacturer and direct distributor, so always close by. Experienced technical advisors and application engineers support you with the task in hand. Triflex delivers to the construction site on time, helps with quotations and during execution.



Application technique

Triflex SAM for bridges

Our systems protect bridges – permanently and reliably. We meet the highest requirements for safety, cleanliness and efficiency. Our high-quality liquid applied waterproofing protect bridge deck panels or underground car park ceilings.

The innovative machine application of our bridge systems by Triflex SAM means fast application, ensuring short closure periods.



Triflex SAM

Who is SAM?

SAM is the spray application machine for PMMA resin-based, 2-component Triflex products. Since the beginning of 2023, SAM has been in service supporting our customers on the construction site. The machine is used to apply products more quickly and ergonomically, with lower labour costs.

The base resin is supplied in IBCs, which means less container waste compared to products supplied in drums. In addition, SAM makes sure that the mix ratio of catalyst and base resin never varies – and the result is a surface with consistent quality.



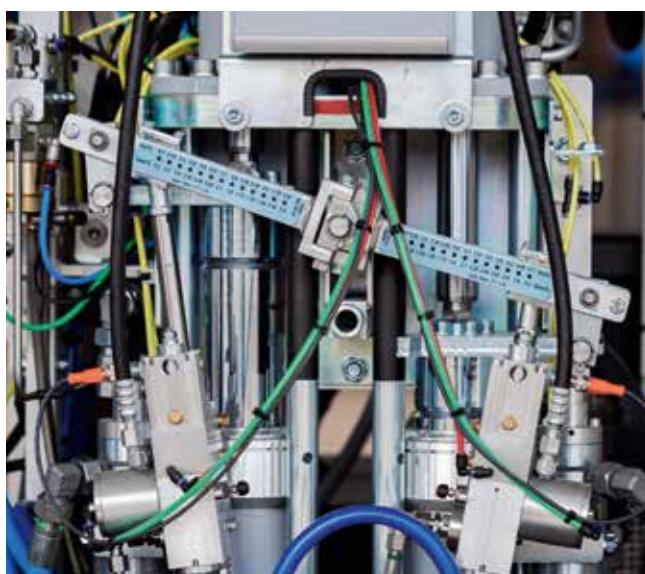


The sophisticated solution

How is Triflex SAM designed?

Triflex SAM comprises a mobile unit containing the following components:

- Volume-controlled pump unit, including control panel
- Hose holder
- Drive unit, incl. diesel tank
- Catalyst and cleaning tanks
- Storage for tools and spare parts, incl. power stirrer for containers



Outside the mobile unit, the mixing element and spray gun, including the selected nozzle, are used. The mixing unit is connected to the mobile unit by a hose, which contains five feed lines for conveying the following components from the machine to the mixing unit:

- Triflex base resin
- Triflex liquid catalyst
- Triflex Cleaner
- Compressed air
- Power supply

The mixing unit is designed for carrying on the operator's back. The base resin and the liquid catalyst are kept separate until they reach the mixing unit to prevent the material from curing in the supply lines.

After mixing, the product is applied using a nozzle. The nozzle system is designed so that Triflex products with different viscosities and high delivery rates are applied with consistent quality. The gun allows mechanical control of the application and cleaning process.



Technology geared to construction sites

How is Triflex SAM controlled?

Triflex SAM is used to apply Triflex 2-component PMMA products. The appropriate mix ratio is set to suit the job in hand, and is guaranteed to stay the same throughout the entire application process.

The desired delivery rate in litres per minute is selected on the control panel, and the pump generates the required pressure of up to 180 bar.



Specifications at a glance

Dimensions of Triflex SAM when closed:	Length: 2870 mm Width: 1560 mm Height: 1395 mm
Dimensions of Triflex SAM including trailer:	Length: 5200 mm Width: 2100 mm Height: 1900 mm
Weight:	Approx. 2.6 tonnes
Delivery rate:	Up to 22 litres/minute*
Delivery height:	Up to 20 metres
Hose length:	60 metres
Diesel tank:	Capacity approx. 120 litres
Consumption:	Approx. 15–20 litres/ working day (8 h)
Material tanks:	IBC (external) Catalyst tank approx. 60 litres Cleaning tank approx. 20 litres
Controlled mixing process with integrated checking control	

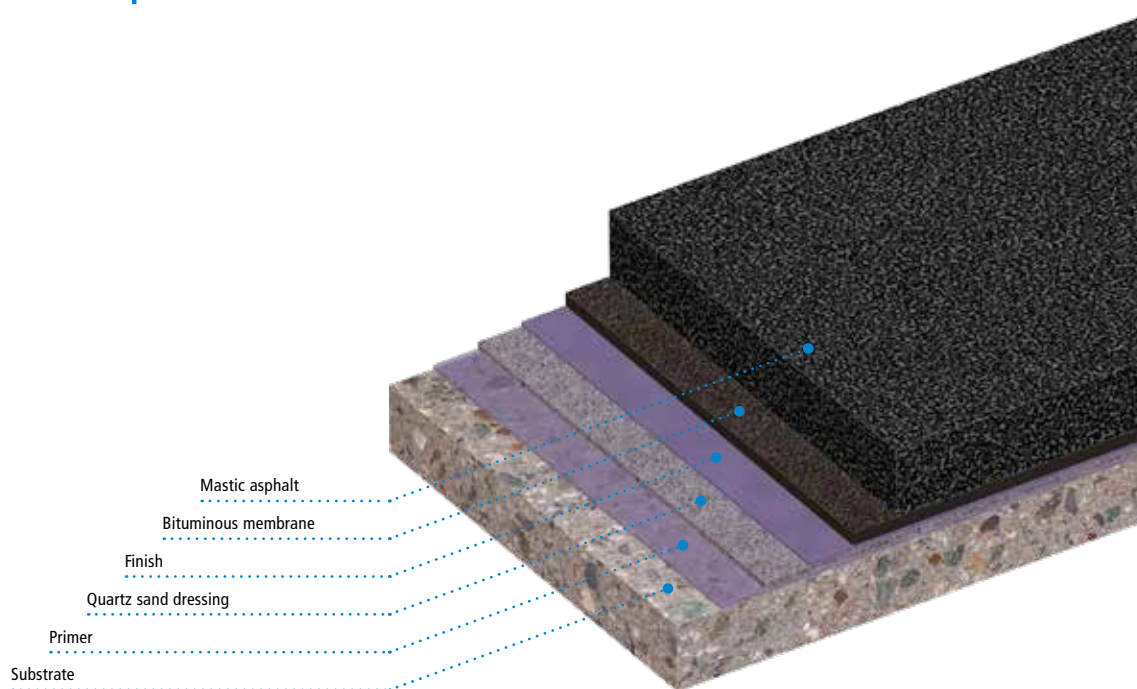
*Depending on viscosity, temperature and delivery height



Finishing system for bridges

Triflex Bridge Deck

System build-up variation 1



System components

For roughness depths ≤ 1.5 mm:

Primer

Triflex Bridge Deck Primer for sealing the substrate and ensuring substrate adhesion.

Quartz sand dressing

Quartz sand dressing 0.7–1.2 mm to increase surface adhesion.

Finish

Triflex Bridge Deck Primer for finishing the substrate.

Bituminous membrane

for application under mastic asphalt for waterproofing concrete bridges and other traffic areas.

Mastic asphalt

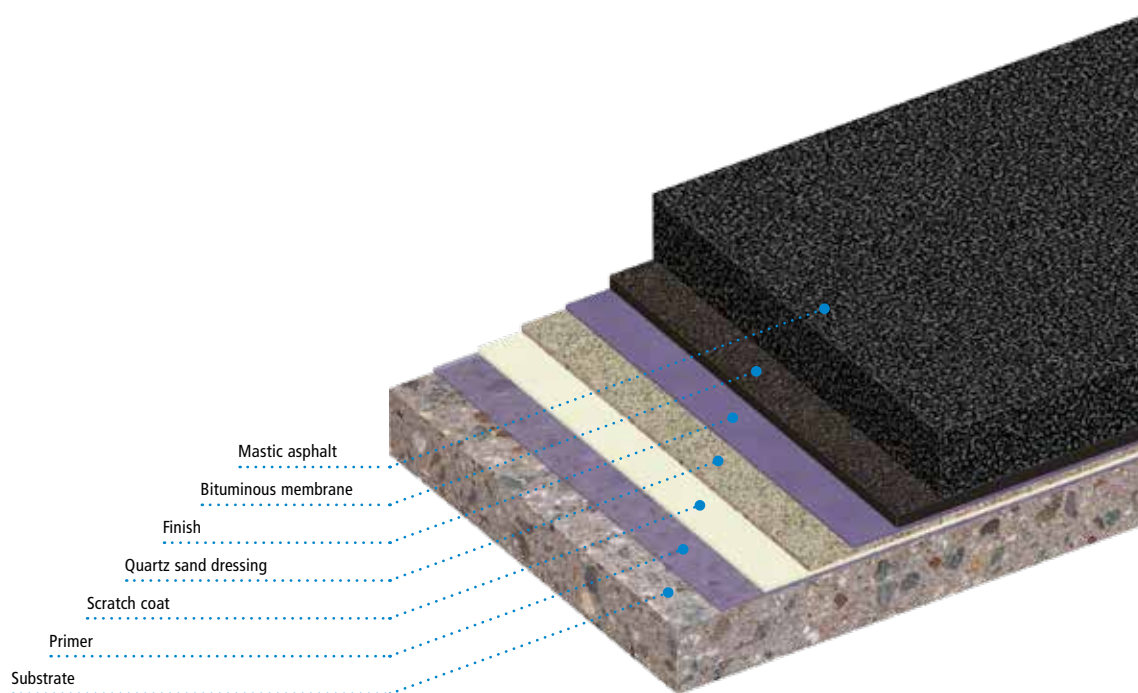
Supporting layer and surfacing solution.



Finishing system for bridges

Triflex Bridge Deck

System build-up variation 2



System components

In case of roughness depths >1.5 mm:

Primer

Triflex Bridge Deck Primer for sealing the substrate and ensuring substrate adhesion.

Scratch coat

Triflex Bridge Deck SC for levelling the substrate.

Quartz sand dressing

Quartz sand dressing 0.7–1.2 mm to increase surface adhesion.

Finish

Triflex Bridge Deck Primer for finishing the substrate.

Bituminous membrane

for application under mastic asphalt for waterproofing concrete bridges and other traffic areas.

Mastic asphalt

Supporting layer and surfacing solution.



System components

Triflex Bridge Deck Primer

Triflex Bridge Deck Primer based on polymethyl methacrylate resin (PMMA) is used as a primer and finish. The primer ensures excellent adhesion to both the substrate and the topcoat. Triflex Bridge Deck Primer can be applied by hand or by spraying using Triflex SAM, our latest innovation. Triflex Bridge Deck Primer can be used on all cementitious substrates, such as bridge decks or underground car park decks, and offers a wide range of benefits:

- Fast curing for an accelerated construction process
- Coating at up to 12 m²/min. (Triflex SAM)
- Can be applied at very low temperatures (0 °C / 90 % relative humidity)
- Rainproof after only 25 minutes at 20 °C
- Bituminous membranes can be welded after only 50 minutes

Triflex Bridge Deck Primer was tested in accordance with:

- TL/TP BEL-EP (Germany)
- ARBEJDSBESKRIVELSE FOR BETONBRO KUNSTSTOFBASERET FUGTISOLERING – AAB/SAB-P (Denmark)
- Tätskikt på broar TDOK 2013:0531 (Sweden)



Triflex Bridge Deck SC

Triflex Bridge Deck SC is a 2-component, unpigmented, prefabricated PMMA scratch coat, which is tested in the Bridge Deck Primer product system in accordance with TL/TP-BEL - EP. Triflex Bridge Deck SC can be used with a roughness depth of up to 5 mm.

Properties:

- Fast-curing
- Solvent-free
- Rapidly resistant
- Can still be applied when relative humidity is high
- Compatible with standard torch-on bitumen membranes
- Heat-resistant when laying membrane with an open flame
- Bituminous membranes can be laid after only 50 mins.
- Initial testing as per TL/TP BEL-EP (1999)

Test report no. 190E-00031OR01-PB01 of the KIWA Polymer Institute



Triflex Concrete Repair

3-component, fast-curing concrete repair mortar for all horizontal cement-bonded substrates, e.g. roadways or parking decks. Its low-shrinkage formulation means that Triflex Concrete Repair can be applied in layers of 5 mm to 50 mm.

Advantages at a glance:

- Fast-curing
- Can be applied at low temperatures
- High mechanical strength
- Good abrasion and impact resistance
- High resistance to chemicals as per DIN EN 13529:2003-12
- Low shrinkage as per DIN EN 12617-1

Technical values:

- Compressive strength: 52 N/mm² (7 d)
- Flexural strength: 19 N/mm² (7 d)





More output, more coverage, less waste

What are the advantages of Triflex SAM?



Speed

- + Up to 4 times quicker than manual application
- + Short construction times, shorter closure times and fast refurbishments
- + 12 m²/minute area coverage (single layer)

Sustainability

- + Less container waste by using IBCs
- + Emission-free mixing



Quality

- + Uniform spray pattern with no wastage
- + Even, all-over application with the appropriate nozzle design
- + Integrated meter reading for monitoring material consumption
- + 6.0 litres/minute delivery rate

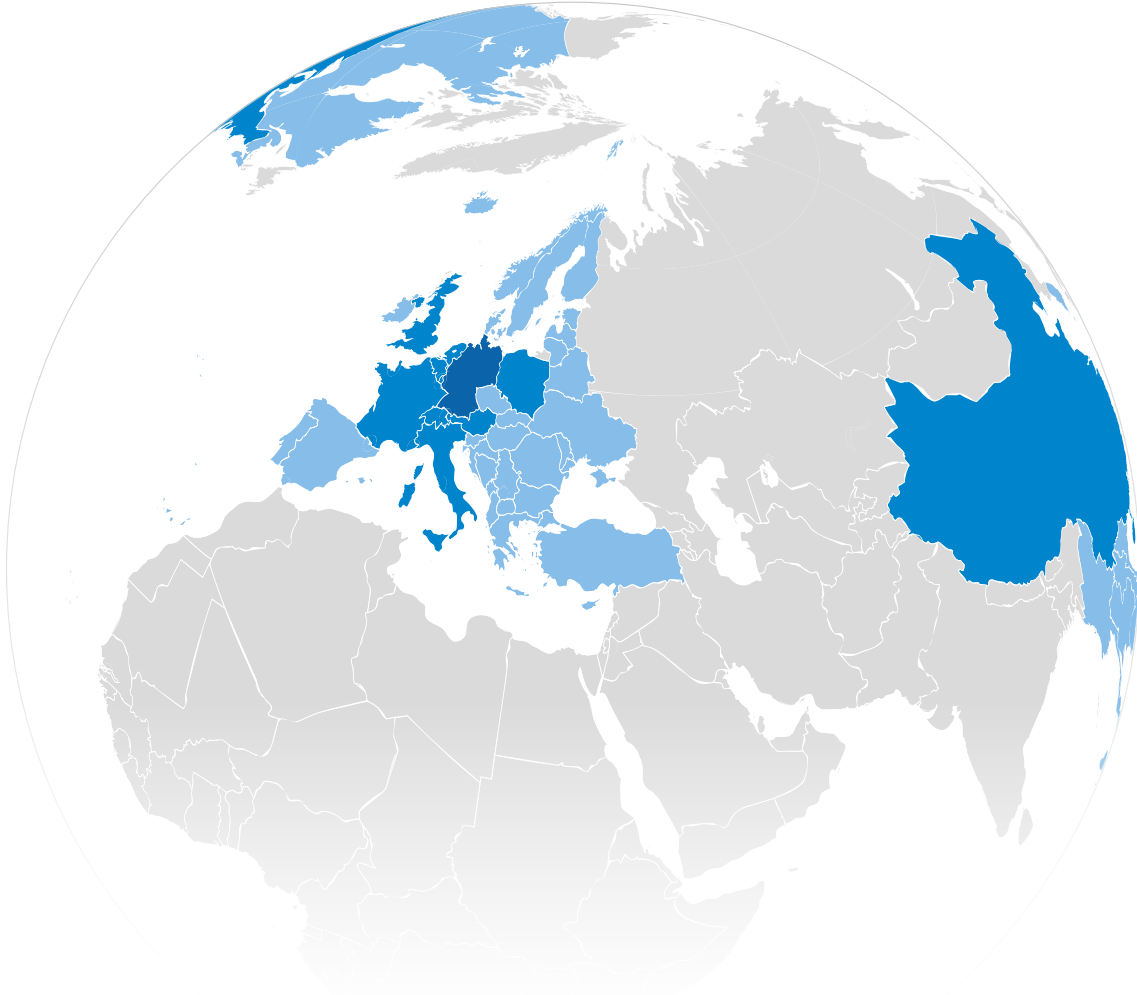
Personnel

- + Ergonomic working from a standing position
- + More efficient personnel planning with shorter construction times
- + Stress-free working despite increased coverage
- + Enhanced working conditions

Triflex

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Triflex International



■ Triflex headquarters ■ Triflex societies ■ Triflex distribution partner

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