BUILDING TRUST

PRODUCT DATA SHEET

Parex Tecfast Concrete

R4 Classification, Deep Section, Rapid Setting Repair Concrete

DESCRIPTION

Parex Tecfast Concrete is a cement based, one-component, rapid setting, shrinkage compensated repair concrete.
Parex Tecfast Concrete is suitable for all concrete works where early strength development is required in order to allow early use of the placed sections. The product may be used for localised repairs plus large area placement or reinstatement of concrete pavements.

USES

- Concrete repairs to accept foot and vehicular traffic.
- Forming of new pavement areas.
- Reinstatement of deteriorated pavement areas.
- Rapid repairs to roadways and runways.
- Structural support situations.

CHARACTERISTICS / ADVANTAGES

- Suitable for use in exposure classes: XO, XC4, XS3, XD3, XF1, XA1.
- Rapid setting.
- High early strength gain.
- 20 - 650mm application thickness.
- Good chemical resistance.
- No special curing required.

APPROVALS / CERTIFICATES

Parex Tecfast Concrete meets the requirements of the Manual of Contract Documents for Highway Works Volume 1 Specification for Highway Works Series 1700 for Structural Concrete.
Parex Tecfast Concrete complies with the classification R4 according to EN 1504-3 and is a concrete repair product for structural repair CC mortar (i.e. based on hydraulic cement).

PRODUCT INFORMATION

Composition	Portland cement, selected fillers and aggregates, special additives	
Packaging	25 kg bags	
Shelf life	6 months	
Storage conditions	Store properly in dry conditions in undamaged and unopened original sealed packaging	
Appearance and colour	Grey powder	
Maximum grain size	6.0 mm	
Density	2250-2300 kg/m³	(EN 12390-7)
Soluble chloride ion content	<0.003%	(EN 1015-17)

TECHNICAL INFORMATION

Compressive strength	2 hours	~20 N/mm²	(EN 12190)
	3 days	~35 N/mm²	
	7 days	~45 N/mm²	
	28 days	~60 N/mm²	
	*typical values at 20°C using 2.25 litres of water		
Modulus of elasticity in compression	41.2 GPa		(EN 13412)
Tensile strength	2.4 N/mm²		(EN 1542)
Reaction to fire	Euroclass A1		

APPLICATION INFORMATION

Mixing ratio	2.25 litres of water for 25 kg powder
Yield	25 kg yields 11.5 litres
Layer thickness	20mm minimum / 650mm maximum
Ambient air temperature	+5°C minimum / +35°C maximum
Substrate temperature	+5°C minimum / +35°C maximum
Pot Life	10 minutes* from the start of mixing. *at 20°C. At other temperatures, pot-life may differ.
Setting time	20 minutes
Initial set time	15 minutes

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

FURTHER INFORMATION

Parex Tecfast Concrete is suitable for use in exposure classes (in accordance with EN 206):
XO, XC4, XS3, XD3, XF4 and XA1.

IMPORTANT CONSIDERATIONS

- Application temperature range shall be +5 to +35°C..
- Substrate must be clean, sound and free of loose material.
- Active cracks should be made passive prior to application.
- Do not part mix.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

SUBSTRATE QUALITY / PRE-TREATMENT

All excavation work and installation of shuttering must be completed prior to start of mixing. All formwork should be of adequate strength, treated with release agent and sealed to prevent leakage.
Sealing can be achieved by using Sikaflex® -11FC+ sealant beneath or around formwork and between joints.
Ensure formwork includes outlets for extraction of the pre-soaking water.
Break out defective concrete to an appropriate profile. Surfaces must be sound, clean, free from ice, oils, grease, standing water and any loose or friable particles and any other surface contaminants. The concrete substrates should be pre-soaked with clean water continuously for 2 to 6 hours to ensure a saturated surface dry condition throughout the operation. Immediately before pouring grout, remove all excess or standing water from within any formwork, cavities or pockets.

MIXING

To achieve the most consistent concrete mix, mechanical mixing using a forced action mixer such as a CreteAngle or Rojo is recommended. Small mixes may be made using a heavy duty, slow speed, high torque drill and Mortar Stirrer.
Measure the appropriate amount of water and place in to a clean mixing vessel. Excess water should not be

added. Slowly add a complete bag of Parex Tecfast Concrete into the water and continuously mix to achieve a uniform and lump free consistency.
The concrete should be placed within approximately 15 minutes of mixing. The working time may be extended in cold ambient conditions and may be slightly shortened in hot ambient conditions. For cold weather working, warm mixing water up to 30°C may be used. Once setting of the concrete has commenced, further mixing should not be used to rework the mix.

APPLICATION

Mixed Parex Tecfast Concrete should be placed onto the dampened prepared surface as soon as mixing is complete. Once placed, fully compact the concrete to obtain maximum strength development. The bed thickness applied in a single application should be between 20mm and 650mm.
The placed concrete will have hardened sufficiently to carry out further work within some 20 minutes depending on the surrounding ambient conditions.

CURING TREATMENT

No special curing is required at temperatures between 5°C and 35°C.
At early ages, do not allow placed concrete to rapidly dry and protect from rain and frost.

CLEANING OF EQUIPMENT

Clean all tools and application equipment with water immediately after use. Hardened / cured material can only be mechanically removed.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the declared data for this product may vary from country to country. Please consult the local Product Data Sheet for the exact product data.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product’s suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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