

## Epiflex

### Pourable Resin Mortar Transition Strip & Gap Filler

#### Description

Epiflex is a three component, flexibilised, non-shrink, moisture tolerant epoxy-urethane resin. It may be used as an 'unfilled' two part system for narrow gaps or as a 'filled' three part system (supplied as standard) for wider gaps and slots. Typical uses include car park and bridge joint transition strips and the filling of voids and joints in concrete, stone and granite elements. Epiflex is also suitable for use on pedestrian or vehicular trafficked areas and complies with Highways Agency Specification for Highway Works.

Epiflex achieves high bond strength with a variety of materials including steel, artstone, natural stone and concrete, and has excellent adhesion even on non-porous surfaces such as granite and metal.

#### Advantages

- No primer required
- Pourable and self-compacting
- Tolerant to damp conditions
- Hard wearing with inbuilt flexibility
- Extremely low modulus of elasticity in flexure
- Suitable for locations with differential movement
- Excellent adhesion to concrete, stone, asphalt & metal
- Waterproof
- Resistant to frost, road salts & fuel oil
- Durable with very long service life

#### Surface preparation


Preparation shall be such as to leave sound exposed surfaces, free from any chemical contamination, oil, grease, dirt, debris and dust.

The perimeter of slot edges and sides in concrete and asphalt should be saw-cut to the required depth or to the depth of the defect, causing good shoulders to be formed. Perimeter edges should be recessed at least 10mm; there must be no feather-edging. All defective and loose material should be broken out and removed using suitable mechanical equipment and compressed air. Surfaces should be visibly dry with no standing water.

#### Mixing

Mixing will require a slow speed drill fitted with an appropriate 80mm paddle, as well as a suitable forced action mechanical mixer.

In low temperatures, the materials should be stored between 10°C and 20°C in order to assist mixing and application.

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Nufins, Kingston House, 3 Walton Road, Pattinson North, District 15, Washington, Tyne & Wear. NE38 8QA 23 0086-CPR-774186	
EN 1504-3 Concrete repair product for non-structural repair PC Mortar (polymer mortar)	
Compressive strength	Class R2 (≥15 MPa)
Adhesive bond strength	≥0.8 MPa
Adhesion after freeze/thaw (50 cycles with salt)	≥0.8 MPa
Dangerous substances	Complies with 5.4

#### Mixing (continued)

Pre-stir the contents of the Epiflex base container.

Pour the entire hardener component into the base container and mix thoroughly using drill and 80mm paddle. After the hardener and base have been thoroughly mixed they should be transferred to a suitable mixing vessel, or mechanical mixer drum (depending upon volumes required for the project). Gradually add the bag of aggregate supplied, whilst blending into the resin.

Once all the aggregate is included, continue mixing for 3-4 minutes until a homogenous consistency is obtained.



## Technical properties of Epiflex

Properties	Standard	Performance Requirement	Declared Value
Appearance			Black Resinous Mortar
Chloride-ion content	EN 1015-17	≤0.05 %	<0.05 %
Aggregate size			Max. 4 mm
Transition strip minimum width			20 mm (Filled) 2mm (Unfilled)
Working time @ 23°C			2-3 hours
Working time @ 5°C			≥4 hours
Density			2000-2100 kg/m <sup>3</sup>
Application temperature			5°C to 35°C*
Minimum cure before stress 20°C			24 hours
Vehicular trafficking time Summer >15°C Winter <5°C			1-3 days 3-5 days
Compressive strength	EN 12190	≥15 MPa	≥ 22 MPa (Filled) ≥ 12 MPa (Unfilled)
Tensile strength	BS 6319-7		≥ 4 MPa (Filled) 8.1 MPa (Unfilled)
Flexural strength	BS 6319-3		Flexed beyond test range
MoE in flexure	BS 6319-3		Flexed beyond test range
Adhesion - concrete	EN 1542	≥0.8 MPa	≥2.0 MPa
Adhesion after freeze/thaw (50 cycles with salt)	EN 13687-1	≥0.8 MPa	≥2.0 MPa
Adhesion after thunder showers (30 cycles)	EN 13687-2	≥0.8 MPa	≥2.0 MPa
Adhesion after dry cycling (30 cycles)	EN 13687-4	≥0.8 MPa	≥2.0 MPa
Skid resistance	EN 13036-4		Class 2
Carbonation resistance	EN 13295	d <sub>k</sub> < ref. concrete	d <sub>k</sub> < ref. concrete
Capillary absorption	EN 13057	≤0.5 kg/m <sup>2</sup> .h <sup>0.5</sup>	≤0.5 kg/m <sup>2</sup> .h <sup>0.5</sup>
Cracking tendency	Coutinho Ring Test		No cracking after 180 days

Technical data shown are statistical results and do not correspond to guaranteed minima.

Tolerances are those described in appropriate performance standards.

Tests were performed after 7 days curing at 23°C, unless otherwise stated.

\*For application below 5°C or to accelerate cure, tent and heat to between 40°C - 50°C.

1 N/mm<sup>2</sup> = 1 MPa

1 kN/mm<sup>2</sup> = 1 GPa

## Application Instructions

Carefully place the mixed Epiflex between the joint and the road surface or substrate, taking care not to entrain air.

Use of a steel float to guide material into place will be assisted by wiping the float face with a rag dampened with Nuwash. Little or no compaction is required by the installer. Allow to settle and then fill to correct level.

In trafficked areas, the finished surface can be immediately blinded with the appropriate grade of standard or coated bauxite.

For advice on applications where gradients are present, please contact Nufins technical department.

## Cleaning

Mixing equipment and tools should be cleaned immediately after use and frequently through the day to avoid product build up, using Nuwash.

## Curing

Epiflex is designed as a cold curing system. To accelerate the rate of cure and accommodate early trafficking (2-3 hours) and/or low temperature applications, components can be warmed in storage and on site, prior to mixing and use. The resin base and hardener containers may be warmed to 15-25°C. The aggregate may be warmed to 40-50°C. The components can then be mixed in the normal method detailed above.

## Packaging

Epiflex 3 part is available in 20kg units (yield approx. 9.5 litres).

Epiflex 2 part is available in 10.6 litre units, subject to quantity.

Bauxite is available in 25kg bags (coverage 2 - 5kg per m<sup>2</sup>).

Coated Bauxite is available on request, subject to quantity.

## Storage

The shelf life is 12 months when stored unopened in dry, normal conditions and away from direct sunlight. Protect from frost. In cold conditions warming the resin components prior to mixing will greatly assist the materials mixing and usage.

## Health & Safety

Product Safety Data Sheets (SDS) are available from Nufins. SDS sheets are provided to help customers satisfy their safe handling, use and disposal needs as well as assist with any conformance requirements made locally by health and safety regulations.

SDS are continually updated to provide the latest information to our customers. We therefore recommend contacting our head office to obtain the most recent and accurate SDS before handling and using any product.

## Limitations

Do not apply below 5°C. A method statement is available on request, detailing application requirements at low temperatures.

## Disclaimer

The information contained herein is to the best of our knowledge true and accurate and is given in good faith but without warranty. The user will be deemed to have satisfied themselves independently as to the suitability of our products for their own particular purpose. In no event shall Nufins be liable for consequential or incidental damages.

Users must always refer to the most recent issue of the Technical Datasheets, copies of which will be supplied on request.

## Technical Support

Through our technical department and laboratories we can offer a comprehensive service to specifiers and contractors. Technical contacts are available to provide further information and arrange demonstrations.