

HYDROPOX FLEX BB

Properties:

HYDROPOX FLEX BB is a 2-component, flexible reactive resin on an epoxide basis with specific chemical and physical properties.

HYDROPOX FLEX BB is used as a priming resin on concrete and asphalt surfaces on which cracking may occur.

HYDROPOX FLEX BB is suitable as filling material for fast curing sealing systems for renovation and repair measures (HANV system) of road surfaces at concrete structures.

During application please refer to the german technical regulation „H HANV - Hinweise für die Herstellung von Abdichtungssystemen aus Hohlraumreichen Asphaltträgergerüsten mit nachträglicher Verfüllung für Ingenieurbauten aus Beton“ (Instructions for application of sealing systems consisting of porous asphalt framework with subsequent backfilling for concrete constructions).

Technical data:

Substance data of components:

Component A

Consistency	liquid	
Colour	light yellow	
Odour	characteristic	
Spec. density (23°C)	approx. 1.12 g/cm ³	DIN EN ISO 2811-1
Dyn. viscosity (23°C)	approx. 825 mPas	DIN EN ISO 2555

Component B

Consistency	liquid	
Colour	light yellow	
Odour	similar to amine	
Spec. density (23°C)	approx. 1.0 g/cm ³	DIN EN ISO 2811-1
Dyn. viscosity (23°C)	approx. 35 mPas	DIN EN ISO 2555

Mixture of A- and B-component:

Processing temperature	10 - 30°C	substrate temperature
Mixing ratio A : B	100 : 56 (pbw)	
Viscosity of mixture (23°C)	approx. 210 mPas	DIN EN ISO 2555

Reaction data (at 23°C):

Pot-life (String gel time)	approx. 25 min	ASTM D7487
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Properties of cured epoxy resin:

E modulus	approx. 1.17 MPa	DIN EN ISO 527
Tensile strength	approx. 1.67 MPa	DIN EN ISO 527
Elongation at break	approx. 140 %	DIN EN ISO 527
Shore A hardness	approx. 90	DIN ISO 7619-1
Bond strength at concrete		DIN EN 1542
with sanding	approx. 1.34 N/mm ²	
without sanding	approx. 1.68 N/mm ²	

Properties in HANV system:

Compressive strength		DIN EN 12390-3
at 22°C	approx. 3.0 N/mm ²	
at 0°C	approx. 10.6 N/mm ²	
Bending tensile strength		DIN EN 12390-5
at 22°C	approx. 2.6 N/mm ²	
at 0°C	approx. 4.4 N/mm ²	

Processing:

Pretreatment of subsurface:

The old covering including the existing sealing can be removed by milling and /or by peeling. It should be noted that the concrete subsurface must not be damaged.

The concrete subsurface is prepared with blasting using solid blasting agents, if necessary after previous precision milling, that HANV layer can be bond solidly and permanently.

The cleanliness of concrete surface must be ensured in accordance with the requirements of ZTV-ING part 7.

The level of drought can be tested by local warming of concrete surface by means of a hot-air fan or hairdryer (wet concrete will be much brighter). If the humidity is too high the concrete surface can be dried by using a panel heating machine. These machines should be available in sufficient quantities to avoid weather-induced delays.

After pretreatment the bond strength must be minimum 1.5 N/mm² on average. Testing of bond strength is according to ZTV-ING part 7, section 1.

When backfilling the asphalt framework fine and near-surface cracks are filled. Deep cracks can be filled in advance by using of injection resin based on epoxy, e.g. *HYDROPOX EP1* according to ZTV-ING part 3, section 5. Exposed reinforcement at concrete carriage-way can be blasted and coated with an epoxy resin, e.g. *HYDROPOX EPG*.

Prior application of asphalt framework concrete failures are filled with *HYDROPOX PC* mortars.

Mixing of components:

The components are stirred in the indicated mixing ratio by means of a slowly moving stirring device (max. 300 rpm) until a homogenous (free of streaks) fluid is produced. Whereby you should take care that the B component is evenly dispersed. Mixing must be carried out for at least 3 minutes. The mixture must be used up within 25 minutes (23°C).

Application of *HYDROPOX FLEX BB*:

Immediately after rolling pass the reactive polymer is applied directly to warm asphalt framework. Application of *HYDROPOX FLEX BB* requires an air temperature of more than 8°C.

If reactive polymer should be filled in cold asphalt framework the surface temperature shall be at least 3 K above temperature of dew point of ambient air. When filling, relative humidity shall not exceed 85 %.

The reactive polymer is spreaded by means of a rubber blade until all accessible cavities of porous asphalt framework are filled. Subsequently, reactive polymer is smoothed from the surface of asphalt framework.

For application to steeply sloping surfaces it should be noted that reactive polymer is self-levelling for a long time. So it may happen that the product will be concentrated at the low points. If surface is tilted too much for complete backfilling in a single working step it should be applied in several steps.

Safety information:

HYDROPOX FLEX BB component A contains epoxy resin. *HYDROPOX FLEX BB* component B contains amines. Both components are classified as hazardous according to Regulation (EC) 1272/2008 (CLP).

It is therefore necessary, before beginning processing, to become familiar with the precautions and safety advice as indicated in the material safety data sheet.

Packaging:

Component A 17 kg steel drum

Component B 9,5 kg metal canister

Bigger packaging on request.

Storage:

Shelf life at least 12 month in original packaging when stored in dry conditions between 15-25°C, protected from heat, frost and direct sunlight.

After the expiration the use of the product is generally not recommended, unless an approval has been provided by TPH. This approval can only be obtained by the quality assurance department of TPH releasing the material after verification of main properties being within specification.

Disposal:

Small quantities of cured product residues can be disposed of as normal domestic waste. Dispose of not cured product components must be effected in accordance with the corresponding local regulations. For further information please refer to the material safety data sheets.

Test certificates:

HYDROPOX FLEX BB - Examination of suitability in HANV system; TPA Meckelfeld 2016

Testing of bond strength at concrete of *HYDROPOX FLEX BB*; TPA Meckelfeld 2016

Basic examination of a backfilling material according to H HANV; ASPHALTA Prüf- und Forschungslaboratorium GmbH Berlin 2017

Basic examination of a backfilling material according to H HANV; ASPHALTA Prüf- und Forschungslaboratorium GmbH Berlin 2020



Legal notice:

The correct and thus successful application of our products is not subject to our control. A guarantee can be issued for the quality of our products within the framework of our sales and supply conditions, however not for successful processing. All data and specifications in this specification sheet are based on the present state of the art and the right to changes and adaptations for the sake of development remains explicitly reserved. The consumption specifications designated by us can be only average empirical values, where deviations are possible on an individual basis and therefore cannot be excluded by us.

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