

Banja Komerc Bekament DOO	TECHNICAL DATA SHEET	Edition 1	Date: November 27 2018
		Version 2	
BK-STIROLFIX BASE			RZ-TLP-009-04

### 1. PRODUCT AND COMPANY INFORMATION

**Commercial product name:** BK-StirolFix Base

**Manufacturer:** Banja Komerc Bekament DOO

34304 Banja

Arandjelovac

tel. 034-6777-500

fax. 034-6777-505

**TDS contact:** email: [laboratorija@bekament.com](mailto:laboratorija@bekament.com)

### 2. DESCRIPTION, FIELD OF APPLICATION

BK-StirolFix Base is a polymer cement adhesive intended exclusively for the adhesion of polystyrene panels (EPS panels) to different mineral substrates. This product is not intended for wire mesh immersion or leveling of the entire façade surface. This product is used as a component for EPS panel adhesion within the Bekatherm Standard thermal insulation system.

### 3. COMPOSITION

**Chemical Composition:** Dry portland cement, polymer binder, additives and mineral filler.

**Hazardous ingredients:** In accordance with the Regulation (EC) No. 1272/2008 on classification, packaging and labeling of hazardous substances and mixtures which brought about the legislative introduction of CLP/GHS classification and labeling system, dry portland cement, which is the system component, is a hazardous ingredient, thus the product is classified as hazardous and bears the label: Danger.

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#### 4. TECHNICAL CHARACTERISTICS

Bulk density, g/dm	1100-1300
Hardened mortar density, g/dm <sup>3</sup> (EN 1015-10)	1400-1600
Adhesion to the substrate: <ul style="list-style-type: none"> <li>➤ concrete, kPa (EN 1015-12)</li> <li>➤ EPS, MPa (EN 13494, ETAG-004) as an adhesive</li> </ul>	≥250 (requirement as per ETAG-004) ≥80 (requirement as per ETAG 004)
Capillary water absorption-c, kg/m <sup>2</sup> min <sup>0.5</sup> (EN 1015-18)	≤0.2 class W <sub>2</sub> as per EN 998-1
Thermal conductivity-λ <sub>10°C dry</sub> , W/m.K (EN 1745 Table A.12)	0.47

Compressive strength after 28 d, MPa (EN 1015-11)	≥ 10 class CS IV as per EN 998-1
Diffusional resistance coefficient μ (EN 1015-19)	≤20
Estimated consumption, kg/m <sup>2</sup>	~4-5 for adhesion
Packaging, kg	25

#### 5. OTHER CHARACTERISTICS

**Appearance:** Dry powder

**pH value of moist adhesive:** 11-13

#### 6. SUBSTRATE

The substrate upon which the adhesive is applied must be solid, clean and dry, without any poorly bound elements, grease stains, etc. The appropriate substrates are all surfaces made of cement-lime mortars (at least a month old), concrete surfaces (at least 2 months old), brick walls, aerated concrete walls, etc. Filling larger hollows and leveling

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with thicker layers should be done with BK-Mal 220 mortar, not the adhesive (façade surface deviation from vertical plane is max.  $\pm 1$  cm/4 m). Thick-layered adhesion application brings about cracking and movement of EPS panels in the form of cracks on the thermal insulation system finish.

Smooth concrete surfaces with low water absorption and formwork impurity residues should be coated with BK-BetonKontakt one day before EPS panel adhesion. New brick walls do not require primer coating. If the panels are to be stuck onto aerated concrete walls, it is advised to coat them with BK-Nivelator as per the instructions for use.

## **7. PREPARATION AND APPLICATION**

Preparation requires addition of powder to approximately 26-28% of water (6.5-7 l of water for 25 kg of powder), with constant stirring with electric mixer until completely homogenised. The mass should be left to rest for about 10 minutes and then again stirred to get an adhesive of proper thickness and without lumps.

Before the panel adhesion initial aluminum strip is placed onto which a certain amount of the adhesive is applied to ensure the low part sealing, and then the first line of EPS panels is installed on top of it.

The prepared adhesive is applied all over the edge of the EPS panel and at additional three points of application in the middle of the panel, which make a 10 cm diameter and a so-called "adhesive cake". The strips applied along the panel edges should be minimum 5 cm wide and 1.5 to 2.0 cm thick. The other line of EPS panels is placed with minimum 30 cm offset with regard to the beginning of the first line panels, which is the so-called shear rule (this rule is to be observed while sticking any following line as well). The finger-joint rule should also be observed while performing the works (cross-adhesion of panels) in the building corners, with minimum 5 cm panel overhang in the corner over the outer surface of the EPS panel from the adjacent side. The panels should be stuck tightly one to another so that the adhesive does not reach the contact surfaces between two EPS panels. Any potential cracks should be filled with EPS panel fractions or polyurethane foam, not the adhesive.

EPS panel adhesion around the openings requires particular attention. It is necessary to tailor EPS panels to avoid overlapping between the opening lines and the panel lines. Under normal conditions ( $T = +23-25^{\circ}\text{C}$ , relative humidity = 50-60%), it takes the adhesive 48 h to dry, after which the panels can be anchored, their excess cut off in the building corners and potential uneven surfaces ground manually with proper tools or mechanically by means of a giraffe. Anchoring is mandatory in case of EPS panel adhesion with BK-

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StirolFix Base adhesive and is done to further fix the panels. Anchoring is done in the junction points and in the middle of the panels (optimally 6-10 anchors/m<sup>2</sup> depending on the number of floors of the building, wind influences, type of thermal insulation panels, etc.). Anchoring should be done through a layer of adhesive do that the anchor head is in line with the EPS panel.

48 h after EPS panel adhesion, under normal conditions, the mesh may be embedded along the entire façade surface. BK-StirolFix Base adhesive is not intended for wire mesh immersion or leveling of the entire façade surface. In case BK-StirolFix Base is used for this purpose, it is highly likely that in time thin cracks will occur on the façade surface.

In all operational stages it is required to use a 2-3 m long rod to check the wall evenness. The temperature of the air and substrate during installation should range from +5°C to +30°C. Avoid working in direct sunlight, wind and rain. High humidity and low temperatures may extend the time required for the adhesive to dry.

## **8. CLEANING THE TOOLS**

The tools should be thoroughly rinsed with water immediately after use. If the tools are not rinsed immediately after use, the solid residues should be removed mechanically.

## **9. HANDLING AND STORAGE**

The material should be transported in closed bags. Ensure proper ventilation during operation if used in closed premises. Protect eyes and skin during moist adhesion works to avoid alkaline reaction. Keep away from children.

The material should be stored in dry space on pallets, protected from moist. Shelf life: 12 months.

## **10. PERSONAL PROTECTION**

Respiratory protection: Use protective mask in case of heavy dusting.

Hand and body protection: Use protective gloves. Wash your hands with water during any break from work. Use protective suit with long sleeves and legs. Eye protection: Use safety goggles for dust and moist adhesive protection.

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## 11. REGULATION INFORMATION

In accordance with the Regulation (EC) No. 1272/2008 on classification, packaging and labeling of hazardous substances and mixtures which brought about the legislative introduction of CLP/GHS classification and labeling system, the dry portland cement component is a hazardous ingredient, thus the product is classified as hazardous and bears the label: Hazard, Caution.



Hazard



Caution

Skin irritation: category 2: H315

Skin sensitization, category 1: H317

Serious eye damage, category 1: H318

Specific toxicity for the target organ – one-time exposure, respiratory irritation, category 3: H335

### H-Statements:

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

### P-Statements:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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## 12. ECOTOXICOLOGICAL INFORMATION

Based on the experience and existing information, no side effects with adverse influence on health are known if the product is used properly. Avoid uncontrolled discharge into water due to alkaline reaction.

## 13. STORAGE

In accordance with local/regional/European/national regulations.

## 14. OTHER INFORMATION

If during the adhesive installation the Contractor notices any aesthetic or application defects, it is bound to suspend the works and notify the manufacturer thereof, and the manufacturer shall consider the complaint as soon as possible. The objections to the above characteristics which are made to the manufacturer after the installation of a large portion or complete quantity of materials shall not be a subject of any such complaint.

## 15. NOTE

Banja KomercBekament DOO performs quality control of the products in its own laboratories and regularly tests them in certified laboratories. This Product Data Sheet is a result of our findings and previous practical experience, and it should serve to all beneficiaries as a recommendation to achieve the best results. If the weather and other conditions are different from those set forth in our instructions, our instructions should be regarded as general guidelines without any warranty regarding the installation.

Banja KomercBekament DOO shall not be responsible for any damages incurred due to improper use, erroneous product selection or poorly executed works. It is assumed that the Contractor has mastered the installation techniques and use of different products.

No obligation whatsoever arises at our end from any of the above stated facts.

This document replaces all previous versions. All previous versions, starting with the listed date the document was compiled, are void.

Date: 28.06.2017.

Previous version: 1.1.- 28.06.2017.

Changed chapters: 4, 6, 7.