

A red and black autonomous mobile robot (AMR) is positioned in the center of a long, brightly lit warehouse aisle. The aisle is lined with tall metal shelving units on both sides. The floor is a smooth, light-colored industrial surface. The ceiling features recessed lighting fixtures. The overall scene is clean and organized, showcasing a modern industrial environment.

# **KDF**

**Sports Flooring Systems & Building Materials**

**POLEPOX FLOOR 817**  
**INDUSTRIAL FLOORING**

[www.kdf.gr](http://www.kdf.gr)

**KDF LTD** ([www.kdf.gr](http://www.kdf.gr)) is one of the most dynamic and export-oriented Greek companies (currently activated in more than 60 countries in 4 continents), based in Greece (EU) and U.A.E too, producing and trading a wide range of building materials and complete systems ( industrial, decorative and sports flooring, waterproofing materials, strengthening and repairing materials, concrete and mortar additives, paints and varnishes).

KDF goes far beyond trade, providing consultancy in marketing and also technical support all the way, from the costing till the finalization of the project. Operating under the requirements of ISO 9001/2015 for production, trade and also application, we make sure our products are first applied successfully at site by our own people before we launch them abroad.

Therefore, our systems have all stood the real life test in different climates, from Middle East till North Europe, and this is one of our main assets, enabling us to provide full and vertical technical support from specifying to final application plus supervision when required or even full application and costing.

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# PHOTOGRAPHS OF PROJECTS



## POLEPOX FLOOR 817

### HARDFLOOR SYSTEM

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**POLEPOX FLOOR 817 is an epoxy-based, self-leveling, three-component flooring.**

Colored, industrial hard flooring suitable for indoor dry floors with heavy traffic.

- Creates colored, easy-to-clean flooring without joints, not requiring maintenance and meeting **health standards**.
- Resistant to acid solutions, alkalis, oil, grease, wastes.
- Prevents floorings from creating dust, strengthening their durability and resistance.
- Resistant to mechanical stresses, wearing from friction and chemical effects.
- It is ideal for covering floorings, mosaics, cement surfaces, decks, bio-cleanings.

**Recommended for food industries, car workshops, parking areas, bio-cleanings, production plants, hospitals for antibacterial use, warehouses, supermarkets, labs etc.**

#### **Preparation – Application**

**Applied only on dry, smooth concrete surfaces(over 1 month old),protected from arising humidity and free of materials that might prevent bonding e.g. dust, loose particles, grease etc.** The success in the application depends on the right preparation of the underlay and use of the material.

- Treatment of the surface with a mosaic machine, with sandblast or rotor machine, depending on the thickness of the final coating
- **Good, dry** cleaning of the surface from dust and residues with vacuum cleaner and squeegees.
- Priming of the surface with **POLEPOX-PR 824**. It is suggested the application of the **POLEPOX-PR 824** in two or more layers until the surface is saturated and a film is created. Consumption: 250-600 gr/m<sup>2</sup>, depending on the absorption and the type of the underlay (smooth power-troweled concrete or other type).
- After hardening of the primer (2-12 hours depending on the ambient temperature) and within 24 hours, follows the application of **POLEPOX FLOOR 817**.
- Good mixing of components A (resin) & B (hardener) packed into separate containers in fixed weight proportions and then the whole quantity of component C (quartz sand) is gradually added into the mixture under continuous stirring until a uniform epoxy mortar is formed.
- The epoxy mortar is poured on the floor and spread on the desired thickness using a notched trowel or special rolls and following the application of the **POLEPOX FLOOR 817**, the self-leveling layer should be rolled using a special spiky-roller in order to release any possibly entrapped air and avoid the formation of bubbles.

## Important Remarks

- During summer or during temperatures over 40 degrees, ideal time for the application of **POLEPOX FLOOR 817** is between 22:00 and 09:00 and temperature less than 40°C, while in the winter, the minimum bearing temperature during application and drying should be over 10°C.
- For the creation of a completely non-slip surface, it is recommended on a still fresh layer of epoxy self-leveling coating the dredging of dry, quartz sand with a particle size 0,1-0,4 mm or 0,4-0,8 mm or 0,8-1,25 mm depending on the desired anti-slipping effect. Consumption of quartz sand: approx. 4 kg/m<sup>2</sup>. After hardening of **POLEPOX FLOOR 817**, any loose grains are being removed using a high suction vacuum cleaner. Then a finishing layer of **POLEPOX COAT 814** is applied for the creation of an acid proof, easy to clean, non-slip surface with consumption: 0,8-1 kg/m<sup>2</sup>.

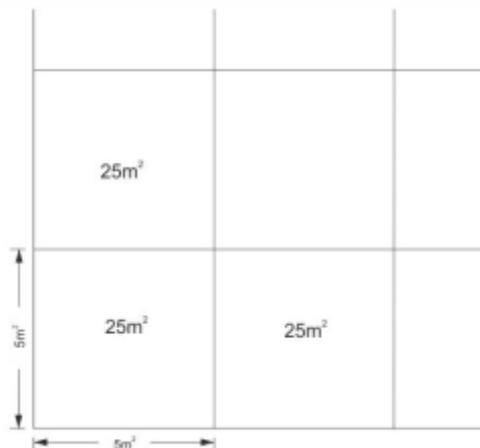
## Substrate

**Concrete surface must be power-trowelled without cracks and must be smooth with a slope of 0.7-1% and humidity under 4% in 10cm depth of concrete.**

Concrete must also be **dry at least for 40 days** and then the application takes place if there is no rising humidity for the sub-floor. Before the application takes place, there must be proper grinding of the surface by a grinding machine to open the pores accordingly and also a measurement by special instrument to measure humidity on the surface and in 10cm under the surface.

Generally concrete is a risky sub-floor and there may be problems with rising humidity, especially in areas where the sea level is really high and when the sea is close or in areas near greenery.

**Always make expansion joints in large areas of concrete, in order to avoid uncontrollable cracks and failures.** Joints should be every 25 square meters creating a grid of 5x5 meters or close to that.



<b><u>SUBSTRATE REQUIREMENTS</u></b>	Concrete quality	at least C20/25
	Age:	at least 40 days
	Moisture content:	below 4%

**Colors** Following colorchart.

# POLEPOX FLOOR 817 COLORCHART



# POLEPOX-PR 824

## TRANSPARENT, EPOXY-BASED RESIN, USED AS AN ADHESIVE COMPONENT BETWEEN CONCRETE SURFACES AND EPOXY COATINGS

### GENERAL CHARACTERISTICS

**POLEPOX-PR 824** is a clear, epoxy, two-component resin, which is used as an adhesive component between concrete surfaces and final epoxy coatings.

- Penetrates in depth.
- Eliminates dust from decay in old & new floorings, reinforcing their durability.
- Offers high mechanical resistance and chemical protection against acid solutions, alkalis, oil, grease etc.
- It can be easily repaired locally if necessary, but must precede grinding of the surface with a sandpaper or mosaic machine.

### TECHNICAL DATA

Basis:	two-component epoxy resin
Appearance:	liquid
Colors:	transparent
Viscosity (A+B):	30-150 mPa s at 25°C
Density (A+B):	0,88 0,003 kg/lt
Mixing proportion (A:B):	50:50 by weight
Application time:	approx. 1 h at 25°C
Final strength:	after 7 days at 25°C
Walkability:	after 2 days
Adhesive strength:	>3 N/mm <sup>2</sup> (breaking of concrete)
Temperature for the application and drying of the material:	10 – 38°C

### SUBSTRATE REQUIREMENTS

Concrete quality:	at least C20/25
Age:	at least 30 days
Moisture content:	below 4%

### PREPARATION - APPLICATION

**Applied only on dry surfaces. Protected from arising humidity and free of materials that might prevent bonding e.g. dust, loose particles, grease etc.** The success in the application depends on the right preparation of the underlay and use of the material.

- Treatment of the surface with a mosaic machine, or with sandblast or rotor machine, depending on the thickness of the final coating.
- **Good, dry** cleaning of the surface from dust and residues with vacuum cleaner and use of squeegees.
- Caution must be taken so that temperature of the substrate as well as ambient air remains above 12°C during application and curing of the materials while relative environment humidity does not exceed 75%.
- Good mixing of components A (resin) & B (hardener) packed into separate containers in fixed weight proportions. Mixing should be performed using a low revolution mixer (300-600

rpm) for 1-2 min. Stirring of the mixture should be performed thoroughly near the sides and bottom of the container in order to achieve uniform dispersion of the hardener.

- In case of troweled surfaces when there is a need for a penetrating material, it is suggested the application of the **POLEPOX-PR 824** in two or more layers.
- Then, application of one or more layers, with **POLEPOX-PR 824**, until the surface is saturated and a film is created. If mat spots appear, then another layer is necessary. The next layer follows the other before the previous starts to dry. The number of layers vary from one surface to another depending on the absorbency.

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### **CONSUMPTION**

250-600 gr/m<sup>2</sup> in two layers depending on the type and the absorbency of the underlay.

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### **APPLICATION TOOLS**

Nappy rolls, brushes, squeegees for smooth industrial surfaces. Tools should be cleaned with solvent immediately after use.

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### **PACKAGING**

Supplied in packages of 30 Kg (two drums). Components A and B have the fixed weight proportion.

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### **STORAGE**

One year in unopened containers in dry places with minimum temperature 5°C and maximum temperature 30°C, protected from moisture and heat.

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### **REMARKS**

- Working time of **POLEPOX-PR 824** decreases when ambient temperature rises.
- Prolonged storage of partially used containers must be avoided as contact with atmospheric moisture will result in skinning and clouding of the product.
- **It cannot be applied in thickness for filling cracks or holes.** In this case it can only be used if mixed with fine dry sand.
- Do not mix or apply unless surface, air and material temperatures are over 12°C during the next 24 hours.
- Do not apply to floors if there is moisture in the subfloor drive or hydrostatic pressure. Prior precautions measurements of humidity with special device are suggested.
- In case of cracks or holes we recommend the use of **EPOFIX-H 207**.
- The usage of mosaic machine must precede the application of **POLEPOX-PR 824** for the creation of pores and the right penetration of the material.
- In case old floors are going to be laid or a long period of time interferes between successive layers (twelve hours in summer or twenty four hours in winter), the surface must be thoroughly cleaned and ground prior to application of a new layer.
- After hardening, **POLEPOX-PR 824** is completely safe for health and meets all requirements for food industries.

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### **CAUTION**

The application must take place in well-aired places using protective gloves. Skin or eye contact must be avoided, otherwise wash carefully with soap and water.

**For more information consult the material safety data sheet.**

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# POLEPOX FLOOR 817

## EPOXY-BASED, SELF-LEVELING, THREE COMPONENT FLOORING

### GENERAL CHARACTERISTICS

**POLEPOX FLOOR 817** is epoxy-based, self-leveling, three-component flooring.

- Creates colored, easy-to-clean flooring without joints, not requiring maintenance and meeting **health standards**.
- Resistant to acid solutions, alkalis, oil, grease, wastes.
- Prevents floorings from creating dust, strengthening their durability and resistance.
- Resistant to mechanical stresses, wearing from friction and chemical effects.
- It is ideal for covering floorings, mosaics, cement surfaces, decks, bio-cleanings.
- Areas of application: industries, food industries, professional kitchens, car workshops, parking areas, bio-cleanings, production plants, hospitals for antibacterial use etc.

### TECHNICAL DATA

Basis:	two-component epoxy resin, aggregates
Appearance:	viscous liquid
Viscosity(A+B+C):	8000-17000 mPa s at 25°C
Bulk Density (A+B+C):	1,572 0,02 Kg/lt
Mixing proportion (A:B:C):	38:12:50 by weight
Granulometry (C):	160 µm - 500 µm
Application time:	approx. 30 min at 25°C
Final strength:	after 7 days at 25°C
Compressive strength (A+B+C): (ASTM D 695)	83.7 N/mm <sup>2</sup> , 7 days at 25°C
Flexural strength (A+B+C): (Din 1164)	69.6 N/mm <sup>2</sup> , 7 days at 25°C
Hardness according to SHORE D:	85 3
Walkability:	after 3 days in thickness of 3mm at 25°C
Adhesive strength:	>3 N/mm <sup>2</sup> (breaking of concrete)
Temperature for the application and drying of the material:	10 – 38°C
Colors:	available in 16 RAL colors and on request from RAL colors

### SUBSTRATE REQUIREMENTS

Concrete quality:	at least C20/25
Age:	at least 30 days
Moisture content:	below 4%

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## PREPARATION - APPLICATION

**Applied only on dry surfaces. Protected from arising humidity and free of materials that might prevent bonding e.g. dust, loose particles, grease etc.** The success in the application depends on the right preparation of the underlay and use of the material.

- Treatment of the surface with a mosaic machine, with sandblast or rotor machine, depending on the thickness of the final coating.
- **Good, dry** cleaning of the surface from dust and residues with vacuum cleaner and squeegees.
- Caution must be taken so that temperature of the substrate as well as ambient air remains above 10°C during application and curing of the materials while relative environment humidity does not exceed 75%.
- Priming of the surface with **POLEPOX-PR 824** in two or more layers. Then, application of one or more layers, with **POLEPOX-PR 824**, until the surface is saturated and a film is created. Consumption: 250-600 gr/m<sup>2</sup>, depending on the absorption of the underlay.
- After hardening of the primer (2-12 hours depending on the ambient temperature) and within 24 hours, follows the application of **POLEPOX FLOOR 817**.
- Good mixing of components A (resin) & B (hardener) packed into separate containers in fixed weight proportions. Mixing should be performed using a low revolution mixer (300-600 rpm) for 1-2 min. Stirring of the mixture should be performed thoroughly near the sides and bottom of the container in order to achieve uniform dispersion of the hardener. Afterwards, the whole quantity of component C (quartz sand) is gradually added into the mixture under continuous stirring until a uniform epoxy mortar is formed.
- The epoxy mortar is poured on the floor and spread on the desired thickness using a notched trowel or special rolls.
- Following the application of the **POLEPOX FLOOR 817**, the self-leveling layer should be rolled using a special spiky-roller in order to release any possibly entrapped air and avoid the formation of bubbles.
- For the creation of a completely non-slip surface, it is recommended on a still fresh layer the dredging of dry, quartz sand with a particle size 0,1-0,4 mm or 0,4-0,8 mm depending on the desired anti-slipping effect. After hardening of **POLEPOX FLOOR 817**, any loose grains are being removed using a high suction vacuum cleaner. Finally a finishing layer of A+B components of **POLEPOX FLOOR 817** or **POLEPOX COAT 814** is applied for the creation of an acid proof, easy to clean, non-slip surface. Consumption: 0,8-1 kg/m<sup>2</sup>.

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## CONSUMPTION

- 1,7 Kg/m<sup>2</sup>/mm,
- 3 Kg/m<sup>2</sup>/1,8mm,
- 4 Kg/m<sup>2</sup>/2,4mm.

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## APPLICATION TOOLS

Rubber rolls, notched trowel depending the desired thickness. Tools should be cleaned with solvent immediately after use.

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## PACKAGING

Supplied in packages of 36 kg (two drums, one bag). Components A,B and C have the fixed weight proportion.

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## STORAGE

One year in unopened containers in dry places with minimum temperature 5°C and maximum temperature 30°C, protected from moisture and heat.

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## **REMARKS**

- Working time of **POLEPOX FLOOR 817** decreases when ambient temperature rises.
- Prolonged storage of partially used containers must be avoided as contact with atmospheric moisture will result in skinning and clouding of the product.
- Do not mix or apply unless surface, air and material temperatures are over 10°C during the next 24 hours.
- Do not apply to floors if there is moisture in the subfloor drive or hydrostatic pressure. Prior precautions measurements of humidity with special device are suggested.
- **POLEPOX FLOOR 817** will yellow upon prolonged exposure to sunlight or high-intensity artificial lights. A urethane topcoat is highly recommended for color stability.
- In case old floors are going to be laid or a long period of time (12 hours for summer and 24 hours for winter) interferes between successive layers, the surface must be thoroughly cleaned and grinded prior to application of a new layer.
- After hardening, **POLEPOX FLOOR 817** is completely safe for health and meets all requirements for food industries.

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## **CAUTION**

The application must take place in well-aired places using protective gloves. Skin or eye contact must be avoided, otherwise wash carefully with soap and water.

**For more information consult the material safety data sheet.**

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The information given here is true, represents our best knowledge and is based not only on laboratory work, but also on field experience. However, because of numerous factors affecting results we offer this information without any guarantee and no patent liability is assumed. For additional information or questions, contact the technical department of KDF LTD.

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