

PU PRIMER 870

TRANSPARENT, ONE COMPONENT, POLYURETHANE-BASED PRIMER, USED AS AN ADHESIVE COMPONENT BETWEEN SUBFLOOR AND SPORTS SYSTEMS

GENERAL CHARACTERISTICS

POLYURETHANE PRIMER 870 is a clear, polyurethane-based, one-component primer, which is used as an adhesive component between the sub-floor and sport systems.

- ✓ Penetrates in depth.
- ✓ Ideal for old and new surfaces.

TECHNICAL DATA

Basis:	one-component polyurethane
Appearance:	liquid
Color:	transparent
Viscosity:	50 – 250 mPa•s at 25°C
Density:	0.9- 1.0 Kg/Lt
Temperature for the application and drying of the material:	10 – 40°C

PREPARATION-APPLICATION

Applied on dry surfaces without rising humidity issues, free of materials that might prevent bonding e.g. dust, loose particles, grease etc (in case of asphalt or concrete). The success in the application depends on the right preparation of the underlay and use of the material.

- **Good, dry** cleaning of the surface from dust and residues.
- Priming of the surface with **PU PRIMER 870** applied by airless sprayer equipment or brush, roller. The base layer (wet-pour mixture of SBR and PU BINDER 1118) should be constructed while **PU PRIMER 870** is still a bit sticky. Curing takes place at ambient temperature by evaporation of the solvent and reaction with atmospheric moisture. High temperatures and moisture will shorten the cure time. **PU PRIMER 870** is applied in two or more layers as a thin film, and on the final layer, wet-pour mixture of SBR and PU BINDER 1118 can be applied on sticky surface.
- The temperature should not fall below 10°C during curing.
- Opened drums should be used up quickly.
- The layer (wet-pour mixture of SBR and PU BINDER 1118) should be constructed while the final layer of **PU PRIMER 870** is still sticky.
- **NOTE: Rain will cause the primer to lose its function! If the primer was affected by rain, the base layer should not be constructed! Instead, the sub floor has to dry and the primer application has to be repeated.**

CONSUMPTION

200-300 gr/m² depending on the type and the absorbency of the underlay.

APPLICATION TOOLS

Brush and airless sprayer. Tools should be cleaned with a PU solvent immediately after use.

PACKAGING

Drums / Barrels.

STORAGE

One year in unopened containers in cool and dry places, out of sunlight, with minimum temperature 5°C and maximum temperature 30°C.

REMARKS

- Working time of **POLYURETHANE PRIMER 870** decreases when ambient temperature rises.
- Prolonged storage of partially used containers containing **POLYURETHANE PRIMER 870** must be avoided as contact with atmospheric moisture will result in skinning and clouding of the product.

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 safety data sheet.

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.

PU BINDER 1118

POLYURETHANE BINDER

GENERAL CHARACTERISTICS

100% solids, aromatic, polyisocyanate-prepolymer, moisture-curing binder based on diphenylmethane diisocyanate. It is MDI based and solvent free and has low viscosity. It exhibits excellent adhesion to all rubber granules and gives a strong performance both in terms of tensile strength and durability.

It is mixed with **RECYCLED RUBBER 858** or **EPDM granules** for the creation of the elastic safety flooring **SAFEPOL MULTICOLOR** or other flexible rubber floorings, ideal for playgrounds, athletic tracks, schools etc. Combines and bonds RIM components, polyurethane granules and sponge particles. Also it can be used as lining for insulation and for pasting.

TECHNICAL DATA

Density of mixture (25°C)	app. 1.08 – 1.18 Kg/Lt
Viscosity (25°C)	4.000 - 8.000 mPa.s
Pot-life (25°C)	30-75 min.
Application temperature	Min 10°C
Curing (25°C and %60 relative humidity)	After 24 hours it cures.

PREPARATION-APPLICATION

Applied on dry surfaces without rising humidity issues, free of materials that might prevent bonding e.g. dust, loose particles, grease etc (in case of asphalt or concrete). The success in the application depends on the right preparation of the underlay and use of the material.

Good, dry cleaning of the surface from dust and residues using vacuum cleaner and squeegees.

Can be used for kids playground, running tracks, sports grounds, walkways and offices.

Moulded in production: Rubber granules and binder are thoroughly mixed, taken into moulds, and then pressure is applied. 160 bar pressure, mold temperature of 130 degree gives reasonable results in 12 - 15 minutes. In molding applications, binder content should not fall below 5%.

On-site applications: Applied on dry surfaces, free of materials that might prevent bonding e.g. dust, loose particles etc (in case of asphalt or concrete). The success in the application depends on the right preparation of the underlay and use of the material.

- **Good, dry** cleaning of the surface from dust and residues.
- Priming of the surface with the special **POLYURETHANE PRIMER 870** in two layers.
- Good mixing of the **PU BINDER 1118** and the **RECYCLED RUBBER 858**. 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 homogeneity.

- Following, the mixture is poured on the surface and spread on the desired thickness using paving machine or by hand, if the applicator is experienced, with rake for spreading, (wooden) straightedge for initial smoothing, flat metal trowel for final smoothing and compacting, cylinder weighing 8-15kg for final compacting-(cylinder should be cleaned repeatedly with diesel to remove stuck granules from its surface).
- The application procedure for **SAFEPOL MULTICOLOR (PU BINDER 1118 and EPDM 856 mixture)** on top of asphalt or waterproof concrete directly is the same as for **SAFEPOL MIXTURE** (the mixture of **PU BINDER 1118** and **RECYCLED RUBBER 858**).

RATIO MIXTURE

- 16% **PU BINDER 1118** and 84% **RECYCLED RUBBER 858**, for sports flooring.
- 14% **PU BINDER 1118** and 86% **RECYCLED RUBBER 858**, for playground flooring.
- 20% **PU BINDER 1118** and 80% **RECYCLED RUBBER 858** for **SAFEPOL COLOURANT**.
- 17% **PU BINDER 1118** and 83% **EPDM 856**.

PACKAGING

220kg in barrels.

STORAGE

12 months in unopened containers in cool and dry places, out of sunlight, with minimum temperature 5°C and maximum temperature 30°C.

REMARKS

- Concrete humidity should not be above 4%, ambient humidity should be at least 40% and most 80%. To begin the application, must wait for the appropriate humidity.
- Working time of **PU BINDER 1118** decreases when ambient temperature rises.
- Prolonged storage of partially used containers containing **PU BINDER 1118** must be avoided as contact with atmospheric moisture will result in skinning and clouding of the product.

CAUTION

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SBR RUBBER GRANULES 858

GENERAL CHARACTERISTICS

It can be used in sports facilities as infill in synthetic grass with the parallel use of round sand and also as one of the components in case of cast applied wet-pour systems for playground floorings or as shock-pad for sport subfloors in athletic tracks and sports fields.

Rubber granule is derived from car and truck tires. During processing, the tires are mechanically granulated, removing all metal and synthetic fibers, as well as any other foreign part contained in there with specially designed sieves, so as to produce a 99.99% clear rubber with high quality.

PROPERTIES

- 100% recyclable
- Long life
- Resistance to adverse weather conditions
- High shock absorbency and vibration damping
- High abrasion resistance

PREPARATION- APPLICATION

In sports facilities and playgrounds to ensure flexibility of surface and vibration absorption.

TECHNICAL CHARACTERISTICS

Granulometry 1-3mm

DENSITY:	0.48kg/cm ³
SPECIFIC GRAVITY	1.20+/- .05 (Water = 1.0)
HARDNESS	60
HUMIDITY(%)	<0.65
ELASTICITY	100% - No change
RESISTANCE	113N/cm - Excellent

PACKAGING

Packaging is available in big-bags -1 ton in following sizes:

Grain size	0,5-1,5 mm
Grain size	0,5-2,5 mm
Grain size	0.5-4.0 mm
Grain size	2-8 mm
Grain size	8-20 mm
Grain size	80-50 mm
Grain size	80-120 mm

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LIQUID CUSHION SP COARSE

VERY ELASTIC, CUSHION, SUB-FLOOR FOR SPORT FIELDS

GENERAL CHARACTERISTICS

LIQUID CUSHION SP COARSE is PU modified, highly flexible, pasty, wet-pour cushion rubber flooring with SBR granules in granulometry of 0.5-1mm, for outdoor or indoor sport courts.

- Applied on asphalt and waterproofed cement surfaces without rising humidity issues, for the creation of a very elastic sub floor of 1-3mm for athletic courts that does not need maintenance.
- Ideal for the creation of very elastic external and internal tennis, basketball, handball, football and volleyball courts etc.
- Applied easily, providing a safe, high quality game.

TECHNICAL DATA

Basis:	acrylic
Appearance:	viscous paste
Colors:	black
Density:	0.85-0.95 kg/l
Viscosity:	20.000-30.000 mPa sec at 25°C
Temperature for the application and drying of the material:	10 – 40°C after 1 day at 25°C
Walkability:	

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.

- **Good, dry** cleaning of the surface from dust and residues with vacuum cleaner and squeegees.
- Priming of the surface with joining resin/primer for the proper adhesion with the subfloor. Application of one or more layers until the surface is saturated. Avoid the creation of puddles of the material. Consumption: 200gr/m² depending on the absorption of the underlay.
- When the primer begins to dry (1 hour usually, depending on ambient temperature), follows the application of the wet-pour mixture of binder & sbr or the special pore filler **POLYFLEX FILLER SP**.
- After one day, **LIQUID CUSHION SP COARSE** is applied, in three layers, diluted in 25% water. The application is done with squeegee.
- Follows the application of **LIQUID CUSHION SP FINE** in two layers, diluted in 25% water.

The application is done with squeegee.

- As soon as **LIQUID CUSHION SP FINE** dries (24 hours at 25°C), follows the application of **POLYFLEX COAT SP**.
- And then the final top coating **POLYFLEX TOP SP** in two layers.

In case of using shock-pad in rolls as subfloor:

- **Good, dry** cleaning of the surface from dust and residues with vacuum cleaner and squeegees.
- **PU FLEX 140**: Good mixing of components A (resin) & B (hardener) packed into separate containers in fixed weight proportions. Mixing should be performed using a 300-600 rpm mixer for 2-3 min until a uniform mass is obtained. 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.
- The mixed adhesive **PU FLEX 140** is applied under each roll using a notched trowel, as soon as possible in order to avoid any problems with the limited pot life. A roller should be used on the top of the shock absorbent rolls within an hour after the adhesive has been mixed.
- After the absorbent rolls have been rolled, avoid any traffic that is not necessary. The floor can receive a second rolling in about two hours, in order to assure very close contact of the tiles at every spot.
- **LIQUID CUSHION SP COARSE** is applied, in three layers, diluted in 25% water. The application is done with squeegee.
- Follows the application of **LIQUID CUSHION SP FINE** in two layers, diluted in 25% water. The application is done with squeegee.
- As soon as **LIQUID CUSHION SP FINE** dries (24 hours at 25°C), follows the application of **POLYFLEX COAT SP**.
- And then the final top coating **POLYFLEX TOP SP** in two layers.

CONSUMPTION

1.2kg/m² for 2 layers up to 3.4 kg/m² for 5 layers.

APPLICATION TOOLS

Squeegee. Tools should be cleaned with **WATER** immediately after use.

PACKAGING

Drums, barrels.

STORAGE

One year in unopened containers in dry places with minimum temperature 5°C and maximum temperature 30°C (avoid sunlight).

REMARKS

- In case of extremely rough and sharp cement or asphalt surfaces it is recommended grinding of the surface with a mosaic machine, sandblast or rotor machine before the application.
 - During temperatures over 40°C, ideal time for the application of **LIQUID CUSHION SP COARSE** is between 22:00-9:00 a.m. and the minimum bearing temperature during application and drying should be 10°C.
 - The freshly coated surface should be protected from high temperatures, wind, rain and frost for at least the first 24 hours.
 - In case it gets damaged, it is simply repaired and recoated on the spot.
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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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LIQUID CUSHION SP FINE

VERY ELASTIC, CUSHION, SUB-FLOOR FOR SPORT FIELDS

GENERAL CHARACTERISTICS

LIQUID CUSHION SP FINE is acrylic-based, highly flexible, pasty, wet-pour cushion rubber flooring with SBR granules in granulometry of 0.2-0.5mm, for outdoor or indoor sport courts.

- Applied on asphalt and waterproofed cement surfaces without rising humidity issues, for the creation of a very elastic sub floor of 1-3mm for athletic courts that does not need maintenance.
- Ideal for the creation of very elastic external and internal tennis, basketball, handball, football and volleyball courts etc.
- Applied easily, providing a safe, high quality game.

TECHNICAL DATA

Basis:	acrylic
Appearance:	viscous paste
Colors:	black
Density:	0,85-0,95 kg/l
Viscosity:	20000-30000 mPa sec at 25°C
Temperature for the application and drying of the material:	10 – 40°C
Walkability:	after 1 day at 25°C

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.

- **Good, dry** cleaning of the surface from dust and residues with vacuum cleaner and squeegees.
- Priming of the surface with joining resin/primer for the proper adhesion with the subfloor. Application of one or more layers until the surface is saturated. Avoid the creation of puddles of the material. Consumption: 200gr/m² depending on the absorption of the underlay.
- When the primer begins to dry (1 hour usually, depending on ambient temperature), follows the application of the wet-pour mixture of binder & sbr or the special pore filler **POLYFLEX FILLER SP**.
- After one day, **LIQUID CUSHION SP COARSE** is applied, in three layers, diluted in 25% water. The application is done with squeegee.

- Follows the application of **LIQUID CUSHION SP FINE** in two layers, diluted in 25% water. The application is done with squeegee.
- As soon as **LIQUID CUSHION SP FINE** dries (24 hours at 25°C), follows the application of **POLYFLEX COAT SP**.
- And then the final top coating **POLYFLEX TOP SP** in two layers.

CONSUMPTION

0.8-1 kg/m² in two layers.

APPLICATION TOOLS

Squeegee. Tools should be cleaned with **WATER** immediately after use.

PACKAGING

Drums, barrels.

STORAGE

One year in unopened containers in dry places with minimum temperature 5°C and maximum temperature 30°C (avoid sunlight).

REMARKS

- In case of extremely rough and sharp cement or asphalt surfaces it is recommended grinding of the surface with a mosaic machine, sandblast or rotor machine before the application.
- During temperatures over 40°C, ideal time for the application of **LIQUID CUSHION SP FINE** is between 22:00-9:00 a.m. and the minimum bearing temperature during application and drying should be 10°C.
- The freshly coated surface should be protected from high temperatures, wind, rain and frost for at least the first 24 hours.
- In case it gets damaged, it is simply repaired and recoated on the spot.

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.

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POLYFLEX COAT SP

SPECIAL, ELASTIC, SMOOTH COATING FOR SPORT COURTS

GENERAL CHARACTERISTICS

POLYFLEX COAT SP is acrylic-based, elastic, two component smooth colored coating for sport courts.

Is combined with prefabricated shock- pad roll in thickness of 4mm to 14 mm or a wet-pour acrylic system of **LIQUID CUSHION SP COARSE/FINE** in order to seal the pores and plasticize the floor.

- Ideal for multipurpose courts, basketball, volleyball, handball, football and tennis external or internal courts. Suitable for sports centers, schools, fitness centers, hallways.
- Applied easily, having low cost.
- Provides a safe, high quality game.

TECHNICAL DATA

Basis:	one-component acrylic resin
Appearance:	viscous liquid
Colors:	available in 24 colors form KDF colorchart
Viscosity:	22.000 – 32.000 mPa•s at 25°C
Density	1.7 – 1.8 gr/cm ³
Walkability:	after 24 hours at 25°C
Temperature for the application and drying of the material:	10 – 40°C

PREPARATION-APPLICATION

Applied only on dry surfaces, without rising humidity issues 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.

- **Good, dry** cleaning of the surface from dust and residues with vacuum cleaner and squeegees.
- The resin component should be thoroughly stirred to incorporate any slight separation, whilst continuing stirring the contents of the hardener container should be added. Continue stirring until a homogeneous mix is obtained.
- Application of the material in three or more layers, for sealing the pores of the underlay and plasticize the surface.

- Application is done with squeegee, beginning from one edge of the area, going down to the other edge in one squeegee's strip, then turning back on the opposite direction overlapping the previous strip by 20-30 cm or so and continuing the same way. Possible traces of the squeegee edges will have to be smoothed out with the squeegee or other tool (e.g. trowel). The next layer follows the other after the previous starts to dry.
- Depending on the ambient temperature, **POLYFLEX COAT SP** is diluted with 3-4% water, prior to application, in order to achieve better fluidity.
- Before the application of the second layer and after the application of the final layer (before apply **POLYFLEX TOP SP**), always use a sanding machine.
- The next day, depending ambient temperature follows application of final to coating **POLYFLEX TOP SP** in 2 crossing layers by a short-haired mohair roller or even better by airless sprayer.

CONSUMPTION

1.8 kg/m² three layers at least.

APPLICATION TOOLS

Rubber squeegees. Tools should be cleaned with **WATER** immediately after use.

PACKAGING

Supplied in barrels of 200 Kg.

STORAGE

12 months in unopened containers in dry places with minimum temperature 5°C and high temperature 30°C (avoid sunlight).

REMARKS

- During temperatures over 38°C, ideal time for the application of **POLYFLEX COAT SP** is between 22:00-9:00 a.m. and the minimum bearing temperature during application and drying should be 10°C.
- The freshly coated surface should be protected from high temperatures and frost for at least the first 24 hours.
- In case it gets damaged, it is simply repaired and recoated on the spot.

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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POLYFLEX TOP SP

UV-RESISTANT, POLYURETHANE-BASED, TWO-COMPONENT, FINISH ALIPHATIC COATING

GENERAL CHARACTERISTICS

POLYFLEX TOP SP is a polyurethane, two-component, solvent-based, finish aliphatic coating for outdoor and indoor sports surfaces.

- It is applied as a final, sealing layer on top of **POLYFLEX SILICON PU SYSTEM**.
- Provides a surface with exceptional resistance in abrasion and various chemical agents.
- It is UV-resistant and thus absolutely suitable for outdoor surfaces.

TECHNICAL DATA

Basis:	two-component polyurethane paint
Appearance:	liquid
Colors:	KDF colorchart
Viscosity(25°C):	1000-3500 mPas
Density(25°C):	1.38-1.48 kg/l
Mixing proportion (A:B):	85:15 by weight
Temperature for the application and drying of the material:	15 – 40°C

PREPARATION-APPLICATION

- Good, dry cleaning of the surface from dust and residues using vacuum cleaner and squeegees.
- Caution must be taken so that temperature of the support surface as well as ambient air remains above 15°C during application and curing of the materials while relative humidity does not exceed 75%.
- The resin component should be thoroughly stirred to incorporate any slight separation, whilst continuing stirring the contents of the hardener container should be added. Continue stirring until a homogeneous mix is obtained.
- Airless sprayer or short-haired mohair roller can apply **POLYFLEX TOP SP**.

CONSUMPTION

App.200-500 gr/m², depending on the substrate. Apply two coats at least.

PACKAGING

5kg, 15kg set (A+B).

STORAGE

12 months in unopened containers in dry places with minimum temperature 5°C and maximum temperature 30°C (avoid sunlight).

REMARKS

- Working time of **POLYFLEX TOP SP** decreases when ambient temperature rises.
 - Prolonged storage of partially used containers containing **POLYFLEX TOP SP** must be avoided as contact with atmospheric moisture will result in skinning and clouding of the product.
 - After hardening **POLYFLEX TOP SP** is completely safe for health.
 - The two layers of **POLYFLEX TOP SP** will have to be applied strictly within 24 hours of one another (European conditions) **or within 3-6 hours (GCC high-temperature conditions)** in order to cover the surface swiftly and protect it from unwanted weather or other adverse conditions (sand dust, accumulated dirt or foreign matter etc.). In case the 24-hour limit (Europe) or the 3-6-hour limit (GCC) is surpassed or weather or other adverse conditions interfere between layers at any time, the surface might need sanding again to restore smoothness and cleanliness before applying subsequent layers of the aliphatic top coat.
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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.

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