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l'unicflex™ | SPORTS & PLAY SURFACES · PU BINDER

UNIPU 030 1K

One-component aromatic polyurethane binder for SBR / EPDM crumbs

COLOUR
Light yellow
liquid binder

1.05 g/cm³	100 %	1300 mPa·s	9.5 h	180 %
Density (25 °C)	Non-volatile content	Viscosity	Pot life (25 °C)	Elongation

Product description

UNIPU 030 1K is a one-component liquid aromatic polyurethane formulation designed for binding recycled rubber crumb. It yields a compact, economical elastomeric binder for running tracks, playgrounds and more, and is particularly well-suited for on-site application.

Usage areas

- Running tracks
- Playgrounds and safety flooring
- Recreational areas
- Decorative flooring, gardens and terraces

Advantages

- Low viscosity, excellent wetting
- Subtle coloration
- High mechanical and elastic properties
- Notable tear resistance
- Thermally stable up to 80 °C
- Ideal for on-site application

Position in the system

Line marking
UNIPU OVERLINE 2K

UV topcoat (optional)
PU TOPCOAT WB 1K · 0.30 kg/m²

EPDM wearing layer
EPDM 1–3.5 mm + PU binder · approx. 8 mm

SBR base layer — THIS PRODUCT
UNIPU 030 1K + SBR 1–4 mm crumb

Primer
UNIPU 045 1K (concrete) · UNIPU 060 1K (asphalt)

Substrate
Concrete / asphalt (min. 30 days, moisture ≤ 3 %)

L'unicflex 2S · MULTI · SP

Binder for SBR base and EPDM layers

DIN 18035-6
Tested systems

For light-coloured EPDM, use the aliphatic UNIPU 035 F 1K binder for long-lasting colour stability.

System performance · DIN 18035-6

Results of the L'unicflex 2S walkway / jogging track system (8 mm SBR + 8 mm EPDM, bound with PU binder), tested in our laboratories.

40 %	1.8 mm	0.62 N/mm²	61 %	62
Force reduction	Vertical deformation	Tensile strength	Elongation at break	Slip resistance (wet)

Water permeability: impermeable · Flammability: DIN 51960 Class 1.

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BOYTEM BOYA VE KİMYA SANAYİ TİCARET LİMİTED ŞİRKETİ
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Technical data (at +20 °C)

Chemical description	**1-component aromatic PU**	Flash point	**> 122 °C**
Colour	**Light yellow**	Hardness	**Shore 82A**
Non-volatile content	**100 %**	Elongation	**180 %**
Density (25 °C)	**1.05 g/cm³**	Stress	**6.0 MPa**
Viscosity	**1300 ± 200 mPa·s**	Tear strength	**6.0 N/mm**
Pot life (1 kg, 25 °C)	**9.5 ± 0.5 h**	Thermal resistance	**stable up to 80 °C**
NCO content	**12.0 ± 0.5 %**	Shelf life	**6 months**

Chemical resistance (0 = worst, 5 = best)

Water · 5 | Salt water · 5 | Sodium hydroxide 40 g/l · 5 | Xylene · 5 | Motor oil · 5 | Hydrochloric acid · 4–5 | Ethyl acetate · 3 | Brake fluid · 2 | Acetone · 1

Application procedure

01
Substrate
Level, compact (pull-off min. 1.5 N/mm²), crack-free, clean and dry. Abrade and prime concrete; optional **UNIPU 045/060 1K** primer at 0.200–0.250 kg/m².

02
Mixing
Add the designated amount of rubber crumb to the binder and mix for several minutes until fully homogeneous and uniformly wetted.

03
SBR layer
Pour and level with suitable spreaders: 10–40 mm SBR (1–4 mm). For 10 mm approx. 7.5–8 kg/m² of mixture.

04
EPDM layer
After 12–24 h, apply 10–20 mm EPDM (1–3.5 mm) at 100 : 20–22; for 10 mm approx. 8–9.5 kg/m².

SBR layer – mixing ratio (by weight)

100 parts | **15–18 parts**

- **100 parts** — SBR rubber crumb 1–4 mm
- **15–18 parts** — UNIPU 030 1K

EPDM layer: 100 parts EPDM (1–3.5 mm) : 20–22 parts UNIPU 030 1K. Thickness must be tailored to the project.

Application conditions
+10 °C – +30 °C
Substrate and air temperature. Substrate moisture < 4 %, air humidity max. 85 %.

Dry to touch (1 mm)
11 h
At 20 °C / 50 % RH; 6 h at 70 % RH. Higher temperature and humidity accelerate curing.

Return to service
48 h
Light foot traffic after 48 h; allow 6–7 days before general use.

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Important: high temperature and moisture may cause bubbling or foaming. The aromatic binder may discolour under UV – this does not affect its mechanical properties.

Packaging

- 220 kg metal containers

Storage

- Keep below +35 °C, away from moisture.
- Use within 6 months of manufacture in the sealed original container.

Safety

- Contains isocyanates – follow the SDS precautions.
- Ensure adequate ventilation and avoid skin contact.
- For industrial / professional users only.
- Treat empty containers as hazardous waste.

Cleaning

- Clean tools with UP-003 Special Thinner.
- Once cured, the binder is insoluble.

LEGAL NOTE

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