

UNIPU 030 1K PU Binder for SBR&EPDM Granules

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PRODUCT DESCRIPTION

UNIPU 030 1K is an elastic, polyurethane-based, one-component, transparent, solvent-free prepolymer used as a binder for applying SBR or EPDM granules to sports surfaces for indoor&outdoor.

APPLICATION AREAS

- Used as an elastic binder for SBR and EPDM granules.

ADVANTAGES

- Solvent-free.
- High elasticity, durability, and tear resistance.
- Resistant to moisture with optimum curing time.
- Suitable for application on sports surfaces in all weather conditions.
- Produced for indoor&outdoor durability, exhibiting high resistance.
- Easy application.

RESISTANCE

Resistant to diluted acids, diluted and concentrated alkalis, cleaning detergents and disinfectants, vegetable, mineral, and animal oils, fresh and sea water, diesel, gasoline, alcohol, and many other solvents.

TECHNICAL DATAS

UNIPU 030 1K	PU PREPOLYMER
COLOR	TRANSPARENT AMBER
Mix Density (20°C)	1.03 g/cm ³
Solid Content (by weight)	99%
Application Temperature Range	+10°C to +30°C
Pot Life (20°C)	20-25 minutes
Surface Drying Time (20°C)	8 hours
Full Curing Time (20°C)	24 hours
Full Curing Time	7 days

APPLICATION PROCEDURE

SURFACE PREPARATION

Before application, the surface to be treated should be dry and clean. The moisture content of the surface should be measured and should not exceed 4%. Chemicals such as surface hardeners should not be used on concrete floors, leaving the concrete surface with a rough plaster appearance.

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MIXING

UNIPU 030 1K should be mixed preferably with 1-4 mm SBR granules at an 82:18 ratio or with 1-3.5 mm EPDM granules at an 80:20 ratio using high-speed pallet mixing apparatus for 2-3 minutes to achieve a homogeneous appearance.

Ensure that material temperatures are between 15°C and +25°C before application. Excessive material should not be prepared beyond the amount that can be applied during the pot life.

MIXING RATIOS

UNIPU 030 1K	SBR:UNIPU 030 1K	EPDM:UNIPU 030 1K
Mix Rate %	82:18	80:20

APPLICATION METHODS

The homogeneously mixed product is poured onto the surface using an SBR/EPDM spreading machine to achieve the desired thickness. Consumption may vary depending on the structure and temperature of the surface.

During the first 20 hours of application, the surface should be protected from direct water contact to avoid foam or cratering issues due to water exposure. Avoid application if the surface is expected to be exposed to rain under atmospheric conditions.

In low temperature and humidity conditions, the reaction rate decreases, leading to longer gelation times. This delays curing time, which should be considered for subsequent coat applications. At higher temperatures, the reaction rate increases, so necessary preparations should be made for a faster application.

CONSUMPTION

UNIPU 030 1K, the application thickness and specific conditions for the substrate are determined by the applicator. Consumption will vary depending on the chosen system. For further details, you can contact BOYTEM's technical department.

INTERCOAT INTERVAL

Minimum of 16 hours, maximum of 24 hours. If this time frame is exceeded, the substrate should be abraded for proper adhesion.

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IMPORTANT NOTES

- During application, if the ambient and surface temperature is above +30°C or below +10°C, suitable temperatures should be awaited. Additionally, application should not be carried out in extremely hot, rainy, or windy conditions.
- Application materials should be brought to the application area 1-2 days in advance and maximum compliance with ambient conditions should be ensured.
- In cold weather applications, heating devices should be used to increase ambient and surface temperatures and packaging should be conditioned at +20 to +25°C to enhance material performance.
- One or Two-component or more complex products like Epoxy or Polyurethane should be applied exclusively by professional, experienced application teams.
- Resin-based systems, their working and reaction times are influenced by ambient and substrate temperatures and relative humidity. In low temperatures, chemical reactions slow down, extending pot life, recoat time, and working time, while viscosity increases leading to higher consumption. High temperatures enhance chemical reactions, shortening the above-mentioned times accordingly. To allow the material to fully cure, ambient and substrate temperatures should not drop below the minimum allowed temperature.
- A finished coating should be protected from water contact for at least 24 hours. Sudden temperature drops can cause the application surface to become dull and have a stained appearance. Therefore, in conditions with extreme day/night temperature differences, the application should start early and finish on the same day. Immediate water exposure after application may result in carbonization, leading to the formation of a sticky film on the surface, necessitating the complete removal and reapplication of the coating.
- Mixing should be with a mechanical mixer with a polyurethane mixing tip attached at 300-400 rpm. Manual mixing should be avoided.
- UNIPU 030 1K is produced and packaged in ready-to-use sets. No thinning solvent should be added under any circumstances.
- Water or moisture entering the barrel will react with UNIPU 030 1K and emit carbon dioxide. Failure to take precautions against moisture ingress or gas entrapment can pressurize the barrels, leading to explosion. UNIPU 030 1K is classified as harmful if inhaled. It has an irritating effect on the eyes, respiratory tract, and skin. It can cause sensitization through inhalation and skin contact. Before use, please read the Material Safety Data Sheet (MSDS).

CLEANING OF TOOLS AND EQUIPMENT

The tools and equipment used need to be cleaned before they dry out. Use UP-002 Thinner for cleaning. Tools and equipment can only be cleaned mechanically (scraping, grinding) after UNIPU 030 1K has fully cured.

PACKAGING

In 220 kg original sealed sheet metal drums.

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STORAGE

Should be stored in unopened original sealed packaging in cool, dry environments and protected from freezing.

SHELF LIFE

Under proper storage conditions at temperatures between 15-25°C, the shelf life is 6 months from the date of production. Opened packages can be used within 2 weeks as long as they are well mixed.

SAFETY PRECAUTIONS

UNIPU 030 1K does not contain harmful components such as formaldehyde, asbestos, or mercury. Additionally, the product contains flame retardant additives. During application, appropriate work clothing, protective gear, goggles, masks, and gloves must be worn to ensure occupational safety and health. As hardening components can be irritating, precautions should be taken to prevent eye and skin contact, including washing thoroughly with soap and water in case of contact and avoiding cleaning with solvents. In case of ingestion, immediate medical attention is required. The application must be carried out in well-ventilated environments, with the applying company taking all necessary precautions. Contact between food and beverages and the product should be strictly avoided in the application area. Workers with chemical allergies should not be employed. For detailed information, refer to the Product Safety Data Sheet.

NOTE

The explanations provided in this technical document are based on test evaluations and results according to relevant standards, aiming to guide applicators. Due to factors such as workmanship, weather conditions, construction, equipment used, and other variables that can affect outcomes, UNİCA does not provide any express or implied warranties regarding this material. UNİCA solely guarantees that the material conforms to its product specifications and limits its sole responsibility towards the buyer or user of this product, in case of manufacturing defects, solely to the replacement value of the product. Under no circumstances shall UNİCA be liable for any direct, incidental, special, or consequential injury, loss, or damage resulting from the use of the material or work performed. UNİCA disclaims any responsibility for any defect, alteration, or change in conditions of the substrate where its products are applied.