PU 200 FINISH

Two-component waterborne clear or coloured polyurethane topcoating for indoor playing surfaces

DESCRIPTION

Two-component waterborne aliphatic coloured matt polyurethane topcoating with selected micro-fillers, specially formulated in MAPEI Research & Development laboratories to form a durable coating on indoor playing surfaces and to mark out playing areas.

WHERE TO USE

· Refurbishment of the topcoating and protective layer on existing polyurethane playing surfaces.
· Application of the topcoating layer on polyurethane resins such as **PU 700 SL** for sports, school or recreational indoor surfaces.
· Topcoating of MAPEI highly flexible multi-layered systems such as **PU Multisport Comfort**.
· Marking out playing surfaces on both new and existing multi-layered polyurethane systems.

TECHNICAL CHARACTERISTICS

PU 200 Finish is a two-component waterborne aliphatic polyurethane topcoating that, thanks to its physical and mechanical properties, gives the treated surface resistance to wear and streaking, thus limiting dirt pick-up and making routine cleaning and maintenance operations easier. The special odourless, waterborne composition of **PU 200 Finish** makes it suitable for use in closed environments and more comfortable for floor installers during application. The special formulation of **PU 200 Finish** helps protect the surfaces from aggressive chemical products such as detergent used to clean indoor surfaces. **PU 200 Finish** is resistant to UV rays so that the colour of the underlying layer remains stable. The mechanical properties of **PU 200 Finish** help improve the seamless elasticity of multi-layered systems, such as **PU Multisport Comfort**, created to provide a high level of comfort for athletes on surfaces subject to intensive use. When **PU 200 Finish** is applied as a topcoating over **PU 700 SL**, thanks to its special composition, it provides better protection for the surface and increases the overall durability of the playing surface. Thanks to the specifically selected fillers used in the special composition of **PU 200 Finish**, it forms a surface with a level of resistance to slip certified for sports purposes and suitable for use in schools and recreational facilities. The high abrasion resistance and hiding properties of **PU 200 Finish** make it ideal for marking out playing areas, thus allowing to create floors with an even finish. From an aesthetic point of view, a wide range of colours is available, along with other shades using the **ColorMap**® automatic colouring system, which means personalised colours may also be created.

RECOMMENDATIONS

· **PU 200 Finish** may be applied over existing coatings: in such cases the conditions of the old coating will need to be checked beforehand, such as its adhesion its compatibility with **PU 200 Finish**, by testing it on a small area of the coating.
· Do not dilute **PU 200 Finish** with solvents.
· Dilute **PU 200 Finish** with water only if the surrounding temperature is close to +30°C up to a maximum of 5%.
· Do not apply **PU 200 Finish** directly on dusty, crumbling or weak surfaces.
· Do not apply **PU 200 Finish** on substrates with oil or grease stains or with stains in general.
· Do not apply **PU 200 Finish** directly on wet substrates or with water in counter-pressure. In such cases the surface needs to be treated with a suitable product and only after treating the surface should the possibility of coating with

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PU 200 Finish be assessed.
- Do not expose the mixed product to sources of heat.
- Protect **PU 200 Finish** from water for at least 24 hours after application.
- Do not apply the product at a rate of more than 0.10 kg/m² in a single coat. Higher rates may cause aesthetic defects in the coating.
- Do not mix partial quantities of the components to avoid mixing errors; the product may not harden correctly.
- If rooms where the product is being used need to be warmed up during application, do not use combustion heaters, otherwise the carbon dioxide and water vapour given off into the air will affect the topcoating and ruin its appearance. Use electric heaters only.
- Do not exceed the maximum recommended recoat time during application; adhesion with the underlying layers may be affected. If the recoat time is exceeded, mechanically roughen the surface before applying the topcoating coat.
- Where possible, remove all particles and substances (sand, salts, etc.) deposited on the surface that could come into contact with **PU 200 Finish** as soon as possible.
- Use suitable specific cleaning equipment and detergent to clean the surfaces, depending on the type of dirt or stain to be removed.

APPLICATION PROCEDURE

Preparation of the substrate

Substrates on which **PU 200 Finish** is to be applied must be compact, strong and flat and have no detached or loose areas. The application surface for the coating in particular must be strong enough to withstand the loads acting on the surface when in use. When applying **PU 200 Finish** over existing coatings, such as polyurethane resin floorings, the condition of the old coating will need to be checked beforehand, such as its adhesion its compatibility with **PU 200 Finish**, by testing it on a small area of the coating. If suitable for recoating, prepare the application surface for **PU 200 Finish** by degreasing it thoroughly and then going over the surface lightly with a sander with fine sanding paper (200 or 300 grade) or with an abrasive pad. It is recommended to contact our Sports System Technology department to check and discuss how to use **PU 200 Finish** correctly, based on local conditions and type of substrate.

Preparation of the product

PU 200 Finish is a two-component product. The two components must be mixed together just before application. Mix component A thoroughly and add the contents of component B. Mix again for at least 2 minutes with an electric mixer fitted with a mixing attachment at low speed to avoid entraining air into the product until they are completely blended. Only in case of application with a surrounding temperature close to +30°C, dilute **PU 200 Finish** with water up to a maximum of 5%. Prepare only the amount that can be used within the maximum workability time (approximately 60-90 minutes at +23°C).

Application of the product

Apply at least 2 coats of **PU 200 Finish** with a 5 mm short-pile roller (such as mohair) or by airless spray only on duly prepared substrates. When applying with a roller, go in opposite directions with each successive coat. If the re-coat time between each coat exceeds 24 hours, lightly sand the surface of the first coat before applying the next one. Re-coat times are shorter at high temperatures and longer at low temperatures. Make sure rooms are well ventilated to help the product to dry.

PRECAUTIONS TO BE TAKEN DURING PREPARATION AND APPLICATION

- Do not dilute **PU 200 Finish** with solvents.
- Dilute **PU 200 Finish** with water only if the surrounding temperature is close to +30°C up to a maximum of 5%.
- Do not apply **PU 200 Finish** on damp or wet surfaces; it may not adhere correctly.
- Do not apply **PU 200 Finish** on dusty, crumbling or weak surfaces.
- Apply **PU 200 Finish** at a temperature range between +15°C and +30°C.
- During hardening of **PU 200 Finish**, the temperature must not drop below +15°C.
- Do not exceed the maximum recommended re-coat time during application, i.e. 2 to 24 hours at +23°C in order to promote adhesion to the substrate. If this time is exceeded, the surface must be mechanically roughened before applying the next coat of **PU 200 Finish**.

CLEANING

Tools used to mix and apply the product may be cleaned with thinners for polyurethane products before it hardens. Once hardened, it may be removed mechanically from tools.

CONSUMPTION

The consumption rate depends on the substrate, temperature and the tools used for application. The figures indicated are for application at +15°C to +25°C; lower temperatures increase the consumption rate and drying time of the material. Application on surface treated with **PU 700 SL**: consumption of approx. 0.10 kg/m² per coat.

PACKAGING

PU 200 Finish clear:
· component A: 5 kg;
· component B: 0.5 kg.

PU 200 Finish coloured:
· componente A: 5.5 kg;
· componente B: 0.5 kg.

STORAGE

PU 200 Finish must be stored in its original packaging, in a dry place away from sources of heat at a temperature of +10°C to +30°C, which must be controlled also during transport. Protect from frost.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)		
PRODUCT IDENTITY		
	component A	**component B**
Colour:	white or various colours using the **ColorMap®** automatic colouring system	opalescent
Consistency:	liquid	liquid
Density at +23°C (g/cm³):	approx. 1.19	approx. 1.19
Storage temperature (°C):	between +10°C and +30°C. Protect from frost.	
Stability of component (from date of production):	12 months	
APPLICATION DATA (at +23°C)		
Mixing ratio by weight:	A: B = 90 : 10	
Consistency of mix:	fluid	
Mixing time:	2 minutes	
Open time at +23°C:	approx. 60-90 minutes	
Dust dry time (at +23°C and 50% R.H.):	approx. 60 minutes	
Application temperature:	from +15°C to +30°C	

Re-coat time at +23°C:	4 to 24 hours
FINAL PERFORMANCE	
Gloss 60°: **(UNI ISO 2813):**	5-10
Set to light foot traffic at +23°C and 50% R.H.:	12 hours
Complete hardening time at +23°C and 50% R.H.:	7 days
QUV colour variation (ASTM G 154):	more than 1,500 hours with no variation
Wear resistance ISO 5470-1 Synthetic surface ≤ 1000 mg per 1000 cycles (m^2):	200
Slip resistance EN 13036-4 (PTV);	108

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.
Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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