

**A SOLVENT FREE HYBRID
POLYURETHANE CONCRETE
SUITABLE FOR USE IN THICKNESSES
BETWEEN 6 AND 9 MM**

KEY BENEFIT SUMMARY

- High thermal resistance
- High chemical and mechanical resistance
- Textured, non slip finish
- Excellent resistance to hot water and permanent exposure to moisture
- Impermeable and non-porous
- Low VOC

PRODUCT INFORMATION

Description

Monopur[®] Industry Mortar is a predosed three component hybrid polyurethane concrete.

A component:

a polyol emulsion

B component:

a polyisocyanate curing agent

C component:

a coloured mix of quartz, cement and additives.

Usage

Monopur[®] Industry Mortar has excellent thermal, mechanical and chemical resistance.

Monopur[®] Industry Mortar is designed to be used particularly in the food Industry (dairies, cooking areas), especially when high chemical resistance and resistance to organic acids is required, and for industrial floors that are subjected to hot water and steamcleaning.

Packaging

Prepacked units of 31.5 kg to facilitate mixing.

Standard colours:

Grey, buff, red, green and cream.

TECHNICAL INFORMATION

Mixing ratio A/B/C:	2.5 / 2.6 / 26.4 by weight
Pot life at 20°C:	± 15 min.
Application temperature:	+12°C to +25°C
Compressive strength:	60 N/mm ²
Adhesion to concrete:	2.7 N/mm ²
Temperature resistance:	-20°C to +70°C (6 mm) -20°C to +90°C, occasionally up to +120°C (9 mm)
Flexural strength:	16 N/mm ²
Tensile strength:	7 N/mm ²
Specific weight:	2.19 kg/dm ³
Coefficient of thermal expansion:	1,4 x 10 ⁻⁵ /°C
E-Modulus:	ca. 2000 MPa (thickness 9 mm) ca. 3000 MPa (thickness 6 mm)
Usage; Foot traffic at 20°C: Mechanical loading at 20°C: Chemically cured at 20°C:	After 8 hours After 24 hours After 7 days
Surface porosity; at 4 hours: at 24 hours:	0.0 ml/m ² /h 0.0 ml/m ² /h
Classement performanciel CSTB;	
P/M	i p r u 4 4 4 4
P/C	a b s 3 3 3
Finish according to BGIA: Standard: Mandurax 0.3 – 0.7 mm: Mandurax 0.6 – 1.5 mm: Mandurax 1 – 2 mm:	R10 V- R12 V4 R13 V8 R13 V10
Reaction to fire classification (NF EN 13501-1):	B _{f1} – s1

Chemical resistance

Chemical resistance after 7 days curing: Monopur[®] Industry Mortar is resistant to diluted acids, alkalis, salts, oils and fats, carburants, aggressive gases and marine air (see chemical resistance list).

USAGE GUIDELINES

Surface preparation

Monopur® Industry Mortar can be applied on concrete or polymer modified screeds.

For other substrates consult RPM/Belgium N.V. / Alteco Technik GmbH.

Surface condition:

The substrate should be installed according to established engineering practice for substrates to receive an industrial polymer based floor system.

Surface preparation is the most vital aspect of all flooring applications.

The preparation operations should be delayed until shortly before the Monopur® Industry Mortar is to be applied to avoid the risk of fresh contamination or further accumulation of dirt. To avoid rising humidity or pressure of groundwater, make sure a waterproofing membrane exists below the substrate.

For new concrete and screeds:

A mechanical treatment (scabbling or shotblasting) is always necessary to remove laitance and to obtain an open surface for a good adhesion. All loose debris and dirt should be removed.

For old concrete and screeds:

Degreasing in case of oil and fats.

Never use solvents, they tend to push oil into the concrete.

In case of serious contaminations, Acetylene flame cleaning followed by mechanical treatment is required. For a good adhesion, a mechanical scabbling or shotblasting is always necessary to obtain a porous substrate. All loose debris and dirt should be removed.

The substrate temperature should be at least 3°C above the dew point during application.

Properties of the substrate:

Age:	New concrete	28 days
Compressive strength after 28 days:	Concrete Screeds	≥ 30 N/mm ² ≥ 25 N/mm ²
Moisture content:	< 6%	
Slope:	Maximum 25 mm/m	
Tensile strength:	1.5 MPa	

When the roughness of the substrate is higher than 0.5 mm, the roughness can be hidden by applying a scratch layer based on Monopur® Industry SL.

Anchorage grooves are needed wherever there is a free edge of Monopur® Industry Floor Systems.

Priming

Prepared concrete substrates are to varying degrees porous. If Monopur® Industry Mortar is applied directly to prepared concrete, air displaced from the concrete can rise and cause defects in the finished floor. Monopur® Industry Primer, a 3 component hybrid polymer based primer without solvents, is important and recommended. Priming also has the effect of making the subsequent application of Monopur® Industry Mortar easier.

Apply Monopur® Industry Primer with a consumption of 0.35 - 0.5 kg/m². The still wet prime coat is sprinkled with quartz size 1.0 - 1.8 mm at ± 150 g/m².

After the Monopur® Industry Primer is fully cured, apply the Monopur® Industry Mortar.

Wear layer

Mixing and application of Monopur® Industry Mortar:

Full details of correct mixing and application procedures are given in the Monopur® Industry Mortar Installation Manual (IM GB 33) which is available to licensed and specialist applicators only.

Liquid components A and B are poured into the mixing pail and stirred for 30 seconds. Make sure that packagings are completely emptied before mixing. When the liquid resin mix is homogeneous, half the C component is added and mixed for around 1 minute until the mix is homogeneous. Ensure that half of the C component is thoroughly made wet with resin. Then repeat by adding the other half of the C component. The mixing time may vary slightly depending on ambient and material temperature. When the mix is homogeneous with no lumps, bring the material to the workplace without delay.

The material is levelled and compacted, each mix being well connected to the previous one.

To obtain a smoother surface and remove trowel marks the upper surface of the mortar can be lightly spike rolled.

Monopur® Industry Mortar antiskid finish:

For an antiskid finish, broadcast the complete non cured Monopur® Industry Mortar surface with quartz. The size of the quartz will determine the slip resistance value of the system (see finish according to BGIA). After curing, remove the excess quartz with a brush and apply Monopur® Topcoat with a roller at a rate of 0.6 to 0.8 kg/m².

Remarks:

For the best mixing results we recommend the use of a forced mixer. The ideal ambient and application temperatures range between +12°C and +25°C. It is important to consider the dew point effect to avoid moisture on the primer.

Due to its components and natural behaviour in the curing process, we very strongly recommend that all persons involved in the specification, mixing and application of our Monopur[®] Industry Mortar System read carefully our Installation Manual.

Coverage

For a thickness of 6 mm: 13.14 kg mortar.

For a thickness of 9 mm: 19.71 kg mortar.

Coverage is influenced by substrate roughness, porosity and temperature.

Cleaning

Clean tools with solvent immediately after application.

STORAGE

All parts of Monopur[®] Industry Mortar System should be stored under cover and free of the ground, in dry conditions above 5°C and below 25°C. This is especially important for the C component to prevent them becoming hard and lumpy and unsuitable for use. Keep all parts free from freezing even during transport.

Exposure to direct sunlight or other intense heat sources will cause uneven temperature gradients in the stored material; such product must not be used until the temperature has become uniform, otherwise application inconsistencies may arise.

SHELF LIFE

In unopened packaging: 6 months.

HEALTH AND SAFETY PRECAUTIONS

Product- and Safety Data Sheets must be read and understood.


TECHNICAL SERVICE

Contact RPM/Belgium N.V. / Alteco technik GmbH.

GUARANTEE

RPM/Belgium N.V. and Alteco Technik GmbH warrant all goods to be free from defects and will replace materials proven to be defective but make no warranty as to appearance of colour. The information and recommendations herein are believed by RPM/Belgium N.V. and Alteco Technik GmbH to be accurate and reliable.

CE CERTIFICATION


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EN 13813
Monopur [®] Industry Mortar in Monopur [®] Industry 6 mm System
Reaction to Fire: B _{F1} – s1 (Monopur [®] Industry 6 mm)
Wear resistance: Class AR 0.5