

PUCEM RT

DESCRIPTION:

PUCEM RT is an aromatic, four-component, solvent-free, pigmented semi self-levelling screed based on polyurethane cement. It is an extremely durable, heavy-duty flooring system with high chemical resistance, low VOC emissions, and a hygienic, impermeable surface.

PUCEM RT is specifically designed for use in the food, beverage, pharmaceutical, and chemical industries, particularly in environments where thermal, chemical, and slip resistance are essential under both wet and dry processing conditions.

The system provides excellent resistance to thermal shock, abrasion, and a wide range of chemicals, including acids, alkalis, salts, and solvents, as well as mineral oils, kerosene, gasoline, diesel, and brake fluid.

PUCEM RT combines rapid strength development with flow characteristics and ease of application, making it easier to install than the PUCEM HF system.

CONSUMPTION:

System	Product	Consumption
Primer	PU CEM L	~ 0,3 – 0,5 kg/m ²
Wearing Course	PU CEM RT	6 mm - 16 kg/m ²
		9 mm - 22 kg/m ²

APPLICATION CONDITIONS:

Substrate Temperature: Minimum 15°C, maximum +25 °C

Ambient temperature: Minimum 10°C, maximum +30 °C

Relative air humidity: Maximum 75% R.H.

Dew point: Beware of condensation!

The temperature of the subfloor and non-hardened material must be at least 3°C higher than the dew point to prevent the risk of condensation formation. The ambient temperature should not fall below +5 °C within the first 24 hours after application. Excessive humidity during early curing stages may cause surface defects, such as white or matte blooming.

APPLICATION:

PAY ATTENTION!

- Always check if you have the correct components.(A, B, filler and pigments)
- Mixing is crucial: adhere strictly to the recommended mixing times, otherwise the chemical reaction will not occur.
- Wear protective clothing and gloves during application.

1. Before applying PUCEM RT, pretreat the substrate with PUCEM L as a primer to seal the pores and prevent pinholes or air bubbles. Always consult the TDS of PUCEM L beforehand.
2. First add the pigment to the A-Component then add the entire contents of Component B to Component A.

PROPERTIES:

Solvent-free, Indoor Air Comfort Gold

Impact, shock, and wear-resistant

Good mechanical properties

Very good flow with structured surface

High chemical resistance

Excellent thermal resistance

Impermeable and non-porous

TECHNICAL PROPERTIES:

Density (g/cm³) Approx 2,10

Solid Content 100 %

Shore Hardness > D80

Compressive Strength (N/mm²) > 50

Flexural Strength (N/mm²) > 15

Processing Time +/- 20 (min.)

Temperature 6 mm -> -25°C to 90°C

Resistance 10 mm -> -40°C to 120°C

Adhesive Strength (N/mm²) > 1,5
(Concrete Failure)

PACKAGING:

Component A: 2,5 kg resin

Component B: 2,7 kg hardener

Filler: 21 kg

Pigment paste: 0,3 kg

Set: 26,5 kg

FORM:

Component A: Liquid, white

Component B: Liquid, yellowish to brown

Filler: Powder

Pigment paste: Liquid, colorful

COLORS:

- Light grey
- Grey
- Dark grey
- Light yellow
- Yellow
- Green
- Blue
- Red

- Mix for approx. 30 seconds with a Collomix Xo 55 R Duo or WK 120 HF mixing paddle until a homogeneous mixture is obtained. Avoid scraping along the bucket wall.
- Add the filler and mix thoroughly for about 1 minute until homogeneous. Do not mix too long, otherwise the reaction starts in the bucket and flowability decreases. Again, avoid scraping along the bucket wall.
- Immediately pour the mixture onto the substrate and spread evenly using a notched rake or trowel to the required thickness. Always pour the entire bucket at once to prevent premature reaction in the bucket.
- For consistent consumption in large areas, divide the floor into sections using tape. This helps regulate material usage.
- Allow the floor to cure for approximately 12 hours before foot traffic. Always verify that the floor is sufficiently hardened before use.

SUBSTRATE PREPARATION:

It is important to saw-cut the substrate along gutters and walls to ensure that PUCEM RT anchors securely to the substrate.

Always prime with PUCEM L. Without primer, excessive resin absorption into the substrate can occur, which reduces the flow and self-levelling properties of PUCEM RT and creates bubbles in the cured floor.

The substrate must be structurally sound and sufficiently resistant to compression, with a minimum compressive strength of 25 N/mm² and an adhesive tensile strength of at least 1.5 N/mm². It must be clean, dry, and free from dirt, oil, grease, and any other contaminants.

Concrete substrates shall be mechanically prepared, for example by abrasive blast cleaning or scarifying, in order to remove cement laitance and to achieve an open-textured surface. Weak concrete and loose cementitious leveling layers must be completely removed, and any surface defects such as blowholes and voids must be repaired.

Prior to application, all dust, loose particles, and friable material must be thoroughly removed from every surface, preferably using a brush and/or an industrial vacuum cleaner.

REMARKS:

Do not apply on substrates with rising damp. Suitable for application on green concrete. After application, protect the surface from moisture, condensation, and water for at least 24 hours at +20 °C.

Process all mixed material immediately, otherwise the flow will decrease rapidly.

Always use material from the same batch number to ensure uniform and consistent color.

If heating is required, do not use gas, oil, paraffin, or other fossil-fuel heaters, as they release large amounts of CO₂ and water vapor that can negatively affect the finish. Only use electrically powered hot-air blowers when heating is necessary.

Switch off underfloor heating during application. After 48 hours, the temperature can be gradually increased. Ensure the room is closed off from direct sunlight by taping off windows. Sunlight can overheat the floor, causing surface defects and disturbances.

PUCEM floors are formulated with an aromatic binder. While this binder provides exceptional strength and wear resistance, it is sensitive to UV exposure and will discolour over time. The degree of colour change varies depending on the pigment used.

Relative Degree of Discolouration

From strongest to least colour change, the expected ranking is:

- Light Grey and Grey** – strongest discolouration
- Light Yellow and Blue** – pronounced discolouration
- Green and Yellow** – moderate discolouration
- Dark Grey and Red** – highest colour stability, minimal discolouration

APPLICATIONS:

- Food industry
- Chemical industry
- Pharmaceutical industry
- Dairy plants
- Company kitchen
- Beverage industry

CURING TIME:

Processing Time at 20 °C	Ca 20 minutes
Walkable at 20°C	Ca 12 hours
Fully Cured at 20°C	24 hours

SHELF LIFE:

Up to 12 months from the production date in original, sealed, unopened, and undamaged packaging, stored dry between +5°C and +30°C.

Exposure to direct sunlight or other intense heat sources causes large temperature fluctuations in the stored material, which can lead to condensation and/or separation. Products may only be used once the temperature is uniform, otherwise inconsistencies and poor performance may occur.

HEALTH AND SAFETY::

For information and advice on the safe handling, storage, and disposal of chemical products, users should refer to the most recent safety data sheet, which contains physical, ecological, toxicological, and other safety-related information.

VALUE BASE:

All technical data stated in this technical data sheet is based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

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**For more information about
Quartzline products or for
technical advice, please contact:**

Quartzline B.V.,
W.A Boogaerdtstraat 5, 3316 BN,
Dordrecht, Nederland

Tel: +31 786513100

www.Quartzline.nl