Product 02556000 4-comp. PU screed, self-levelling and wear coat, solvent-free, coloured

1 General Data

Fields of application

VIACRETE PU-MF is used in situations subject to exposure to high chemical, thermal and mechanical loads as for example in dairy, food & beverage production facilities, warehouse & distribution centres, chemical and pharmaceutical processing plants. It is normally used as a topping on concrete floor at 3 to 4 mm thickness or as wear coat for with quartz sand scattered surfaces up to 5 to 6 mm.

Product description

VIACRETE PU-MF is a 4-component, self-levelling and seamless polyurethane concrete flooring system. It has excellent mechanical and chemical resistance properties. It is resistant to organic acids, dilute mineral acids, vegetable and animal fats, petroleum oils and solvents. It is suitable for use in conditions of a wide temperature range between -5°C to +70°C (3 mm); -15 to +70 (4 mm) or as broadcasted system up to +90°C (5–6 mm). Exposed to UV and weathering VIACRETE PU-MF is not color stable.

Characteristics

- good chemical resistance
- high impact and abrasion resistance
- high thermal shock resistance
- wide service temperatures -15°C - +90°C
- hygienic surface
- complies to HACCP requirements
- odorless, non-tainting to food
- solvent free
- low emission

VIASOL systems

VIASOL PU-MF is the content for the VIASOL systems:

VIACRETE***MF standard / UV***
VIACRETE***MF standard SR / UV***

Care and maintenance

The lifespan & performance of your resin floor can be extended considerably by adopting a regular cleaning and care programme. We recommend the use of an alkaline based cleaning agent.

Technical support

For system build up possibilities and detailed information relating to the laying of VIASOL products, please refer to the VIASOL System Planner or contact VIACOR Polymer GmbH directly.
Phone: +49 (0)7472-949990
E-Mail: info@viacor.de

(A) Technical data		
Liquid mixture (A+B)		
1.	Solids content	99 %
2.	Density (23°C)	1.89 g/cm³
3.	Viscosity (23°C)	7000 mPas
4.	Packaging size (4-component)	30.27 kg (4.5 kg A + 4.5 kg B + 21 kg C + 0.270 kg colour paste)
5.	Shelf life	9 months in closed original container 6 month comp. C
6.	Storage Protect from frost!	Dry at 10–30°C, avoid direct sunlight

(B) Technical Data		
Cured material		
1.	Flexural strength (DIN EN ISO 196/ASTM C109)	>19 N/mm²
2.	Compressive strength (DIN EN ISO 196/ASTM C109)	>45 N/mm²
3.	Hardness Shore-A (EN ISO 868)	approx. D 80 (28d)
4.	Fire classification (EN 13501-1)	Bfl-S1
5.	Water absorption coefficient (EN 1062-3)	w < 0,01 kg/m²h^{0,5}

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2 Application method

Please note our general processing guidelines for VIACRETE systems. VIACRETE systems should only be processed by trained personnel.

Substrate preparation

Concrete substrate shall be firm, clean and dry with a surface pull-off strength of minimum 1.5 N/mm². The substrate quality should be a monolithic reinforced concrete with min. C25/30 according to EN 206-1, (except lightweight concrete), or cement screeds in the composite, minimum CT-C30-F4, minimum layer thickness 25 mm, for other substrate see our general application guidelines for VIACRETE PU concrete systems.

Repair imperfections (holes and cracks) with VIASOL EP-T703 combined with quartz sand and make good the grading and levelling where necessary.

VIACRETE PU-MF is always applied on a prepared and with VIACRETE PU-SC primed surface.
Remove surface laitance, contaminants, coating, curing compound and all weak and loose materials. Prepare concrete surface by diamond grinding, scarifying or captive shot blasting to provide the appropriate surface profile for optimum mechanical keying.

Cut grooves of 3 mm width and 5 mm depth minimum just inside the perimeter of the area and around drains, columns and protrusions where VIACRETE PU-SC will be applied. Detailed information you can find in the VIACRETE application guidelines.

Self-levelling coating / wear coat

Apply the self-levelling coat VIACRETE PU-MF with a notched trowel or spatula or with a notched squeegee in the required layer thickness onto the primed surface. The entrapped air must be de-aerated with a spike roller. The consumption is approx. 5.7 – 7.6 kg/m² depending on the required layer thickness. As wear coat for slip resistant surfaces apply 4.0 – 5.7 kg/m² and broadcast fresh material with VIASOL QS 0.3-0.8 mm, QS 0.6-1.2 mm quartz sand or similar grain in excess.
After curing remove not bound QS by sweeping and vacuum cleaning. If low slip resistance is required grind surface slightly before vacuum cleaning.

Application

Before starting the application, the material temperature must be close to the site conditions but should have min. 10°C.

Dispense the colour paste into Component A. Mix to disperse the colour paste (1 minute) until homogeneous, add component B and mix (1.5 to 2 minutes) until homogeneous using an electric stirrer with a speed of min. 300 rpm.

(C) Technical data		
Liquid mixture (A+B)		
1.	Mixing ratio A : B Mixing ratio A : B : C : CP	1: 1 by weight (kg) 4.5 : 4.5 : 21 : 0.270 (kg)
2.	Working time (23°C)	approx. 10-15 minutes
3.	Application temperature:	10 – 30°C (min. 3°C above dew point)
4.	Permitted rel. air humidity*	min. 40 % - max. 90 %
5.	Material consumption (PU mortar)	1.9 kg/m² per mm 5.7 – 7.6 kg/m² for 3 -4 mm
6.	Over coating (23°C)	within 12 - 24hours
7.	Cure time to withstand*: Foot traffic Heavy traffic Exposure to chemical	 after 12 – 20 hours after 2 days after 7 days

* At low temperatures and low humidities (<40% relative humidity), the curing times and thus the times for recoating and walkability are delayed.

Pour the mixture in a **compulsory mixer (min. 50 kg capacity)** and add component filler C gradually to the mix with the mixer running, until homogeneous (min. 3 minutes).
For smaller areas use a mixing pail and a double stirrer (min. 40 kg capacity).

If necessary, scrap the sides and the bottom of the mixing vessel to ensure thorough mixing. Small mixing pails should be poured in another pail and shortly (1 minutes) mixed again.

Pour out the wet mix on the prepared floor. Spread over the floor area at the nominated thickness (3 - 4 mm) using a pin rake or notched trowel.

Ensure to maintain continuity of wet material between pours (max. 5 – 7 minutes). While wet, roll the surface with a spiked roller to remove entrapped air. For slip resistant surface the fresh material must be broadcasted with the corresponding aggregate.

Subsets cannot be mixed because only complete sacks of filler may be processed.

For cleaning of tools and other contaminations VIASOL SO-X14 tool cleaner is used.

Over coating

Over coating should be carried out within 24 hours after application of VIACRETE PU-MF. If longer than 24 hours, it is necessary to lightly grind the surface before overcoating is carried out.

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3 Further information

CE-Mark

CE-Mark according to EN 13813
EN 13813: 2003-01, Screed material and floor screeds - Screed materials - Properties and requirements is the basis for requirements for floor screeds used in indoor flooring constructions. Resin coatings and sealer are also subject to this norm.
Details see CE-conformity mark and conformity declaration.

Deco paint-Guidelines (EU 2004/42/EG)

The maximum allowable VOC content for Product Category IIA j Type wb products (in the ready to use state) is:
Stage II (from 2010) < 140 g/l VOC
In the ready to use state, this product contains less than 140 g/l VOC.

Warnings and precautions

Information relating to the safe handling of this product can be found in the Material Safety Data Sheet. Local regulations concerning the safe handling of epoxy resin based coating materials must be observed.
Suitable protective clothing including suitable eye protection must be worn.

Disclaimer

All information in this technical data sheet is based on our current knowledge and experience. This does not release the applicator from performing their own tests as many application factors, beyond our control, affect the application of our product. No guarantee of characeristics or suitability for a special purpose can be derived from this information. All present data, descriptions, drawings, photos, ratios, weights etc. are subject to change without prior notice and do not represent contracted characteritics of the product.
Due to different materials, sub-bases and working conditions, no guaratee of an application result or any liability claims can be derived from these details or from an unwritten technical advice except for liability claims based on:
-damage to life, body or health resulting from a negligent violation of obligations or a deliberate or negligent vialation of obligation of a legal representative or assistant and
-if we are charged with intention or gross negligence.

The user has to test the products for their intended use. The user is responsible for following existing laws and orders and for observing third party trade mark rights.

As all VIACOR data sheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue (see www.viacor.de or contact us directly).

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