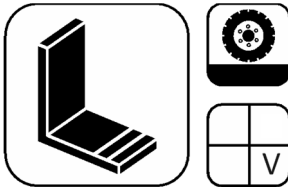


Wecryl Surface Protection System OS F a



Brief description

The Wecryl Surface Protection System OS F a is a high-quality, flexible PMMA coating system that has been tested in accordance with ZTV-ING part 3 section 4 (Supplementary Technical Regulations and Guidelines for the Protection and Maintenance of Concrete Components). The waterproofing system, comprised of an elastic surface protection layer (PESPL) and a crack-bridging covering layer, is therefore ideal as a surface protection layer with enhanced dynamic crack-bridging properties for areas suitable for foot and vehicle traffic.

The surface can be created with a wide range of colours, patterns or markings. Liquid application and high bonding strength on nearly all substrates makes the system especially suitable for refurbishment work. Its outstanding crack-bridging properties make the system an economical and high-quality solution for bridge decks and verges.

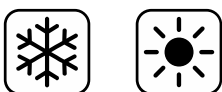
Properties and advantages

- Highly flexible and crack-bridging even at temperatures as low as -20 °C (100,000 dynamic cycles and
- tested to crack bridging class B 4.2 at -30 °C)
- Tested and approved in accordance with TL/TP-BEL-B 3 (1995) as sealing layer for bridge deck surfacing on concrete
- Waterproofing resin without fleece
- Static crack bridging after exposure to stress > 8.0 mm
- ZTV-ING Part 3 approval, section 4 "Protection and repair of concrete components" (TAB report)
- Suitable for heavy duty (vehicles, foot traffic)
- Fully bonded to the substrate, therefore no flow paths underneath for water
- Can be applied to almost any substrate
- Permanently weather-resistant (resistant to high and low temperatures, UV rays, hydrolysis)
- Resistant to most commonly used acids and alkali solutions
- Wide range of design options (colour finish, road markings etc.)
- Solvent-free
- Fast and easy application

Areas of application

- Surface protection and waterproofing of concrete structural components with near-surface and/or separating cracks and regular mechanical stress
- Foot and vehicle traffic
- Bridge decks and verges

Application conditions



Temperatures

The system can generally be applied within an ambient temperature range between min. 3 °C and +35 °C. Some products are also suitable for application at sub-zero temperatures. Please refer to the table below for exact details.

Wecryl Surface Protection System OS F a

Product	Temperature range, in °C		
	Air	Substrate*	Material
Wecryl 821	+3 to +35	+3 to +30*	+3 to +30
Wecryl 130	+3 to +35	+3 to +30*	+3 to +30
Wecryl 131 K	+3 to +35	+3 to +30*	+3 to +30
Waterproofing of details			
Wecryl 240 thix	-5 to +35	+3 to +40*	+3 to +30
Waterproofing layer PESPL			
Wecryl 240	-5 to +35	+3 to +40*	+3 to +30
Protective layer			
Wecryl 333	-5 to +35	-5 to +40*	+3 to +30
Wearing layer			
Wecryl 407	-5 to +35	+3 to +40*	+3 to +30

* The substrate temperature must be at least 3 °C above the dew point during application and curing.

The substrate temperature must not be less than +3 °C if a topping is applied to the surface. Curing problems can occur at lower temperatures.

Humidity and moisture

The relative humidity must be ≤ 90 %.

The surface to be coated must be dry and free of ice.

The surface must be protected from moisture until the coating has hardened.

Application rates and curing times

	Application rate [kg/m ²]		
	Smooth substrate	Fine-sandy	Rough
Wecryl 821	Approx. 500 g/m ² to 1200 g/m ²		
Wecryl 130	Approx. 600 g/m ²	* **	* **
Wecryl 131 K	Approx. 1700 g/m ² per 1 mm layer thickness	* **	* **

* Roughness heights must be determined in accordance with German guideline ZTV-ING (determination of roughness height) and an additional operation may be required to level out or smooth over the surface.

** In the case of roughness heights > 1.5 mm and < 5 mm we recommend levelling problem areas with Wecryl 131 K.

Application rates and curing times (continued)

Waterproofing layer	Waterproofing of details		
Wecryl 240 thix*	Two layers, each 1.50 kg/m ²		
Principally effective surface protection layer	Waterproofing of details	Waterproofing of main area (PESPL)	
Wecryl 240		At least 2.4 kg/m ²	

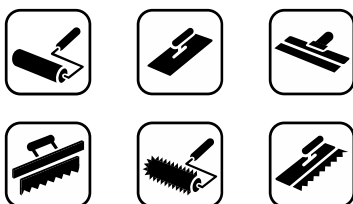
Wecryl Surface Protection System OS F a

Protective layer/wearing layer	On top of the main area waterproofing	
Wecryl 333 (topping layer)	At least 4.0 kg/m ²	
Wecryl 407 (top sealer)	Approx. 0.7 kg/m ² to 0.9 kg/m ²	

*Waterproofing of all details (e.g. kerbs) is done using Wecryl 240 thix without fleece.

Product	Curing time (approx. values at 20 °C)			
	Pot life	Rain-proof	Overlayable	Fully cured
Wecryl 821	10 min	30 min	45 min	2 hours
Wecryl 130	10 min	30 min	60 min	3 hours
Wecryl 131 K	12 min	30 min	60 min	3 hours
Wecryl 240	15 min	45 min	1.5 hours	3 hours
Wecryl 333	15 min	30 min	1 hours	3 hours
Wecryl 407	125 minutes	45 min	60 min	3 hours

Application tools



Product	Application tool
Wecryl 821	-Rubber floor squeegee: use the back side, do not skim too cleanly -Sheepskin roller to smooth out any excess material -Brush (only for areas not accessible with the sheepskin roller)
Wecryl 130	-Rubber floor squeegee (be sure to apply an adequate amount!) and then smooth out with the sheepskin roller -Notched rubber squeegee (3 mm), about 600 g/m ²
Wecryl 131 K	Smoothing trowel, smoothing spatula or rubber floor squeegee (be sure to apply an adequate amount)
Wecryl 240	Application without fleece Notched rubber squeegee (11 mm), then spiked metal roller
Wecryl 240 thix	Sheepskin roller
Wecryl 333	Coating trowel with triangular teeth (notch pattern 78) or smoothing trowel
Wecryl 407	Hard rubber squeegee or ordinary rubber squeegee (top sealing)

Substrate preparation and primer selection

Correct substrate preparation and a proper primer layer are essential to ensure the functional durability of the WestWood® system. The roughness height of the surface must be determined using the sand patch method, and the resulting values for additional layer thickness must be complied with (see ZTV-ING Part 6, section 1) The primer layer then applied creates an ideal barrier and enables optimal adhesion between the substrate and the WestWood® system. Please refer to the Application Guidelines – Substrate for correct substrate preparation and selection of the right primer.

Small air bubbles (pinholes) can be closed or prevented by applying the substrate stabiliser Wecryl 821 to the entire surface. The primer is applied to the prepared substrate.

Wecryl Surface Protection System OS F a

Primer layer

Wecryl 821– substrate stabiliser

Wecryl 821 is an ultra-low-viscosity primer that closes cracks and pores reliably. Wecryl 821 is ideal for improving surface strength on porous substrates. Its use is not essential. This system component can be used as an additional option for the problems just mentioned. Wecryl 821 is best applied evenly with a rubber floor squeegee. The resin penetrates rapidly into the substrate; more should then be applied wet-on-wet until a thin surface film is visible. Once it has cured, apply Wecryl 130 as the primer.

Wecryl 130 – primer for mineral substrates (single layer)

Wecryl 130 is used for this. The product fills the pores in the surface of the concrete and creates a permanent bond between the concrete and the next layer. Wecryl 130 is applied with a notched rubber squeegee (3 mm) or rubber floor squeegee and then smoothed out.

Wecryl 130 – sealer for mineral substrates (two layers)

Wecryl 130 is used for this. The product fills the pores in the surface of the concrete and creates a permanent bond between the concrete and the next layer. Two layers are applied, with a topping of quartz sand in between. The second layer is not topped with quartz sand.

The first layer of Wecryl 130 is applied on the substrate with the notched rubber squeegee (3 mm) or rubber floor squeegee at a rate of approx. 600 g/m² until the surface is saturated, and then smoothed out with a sheepskin roller. Broadcasting of (kiln-dried) quartz sand 0.4 - 0.8 mm (application rate approx. 1.5 - 2.0 kg/m²) must begin while the primer is being applied. Any sand that is not firmly incorporated in the first layer of the sealer after curing must be removed (sweep and/or blow it away).

The second layer of Wecryl 130 can be applied with a sheepskin roller or a floor squeegee after just 60 - 45 min. (temperature-dependent) at a rate of at least 500 g/m².

Levelling

Wecryl 131 K – scratch coat for greater roughness heights

Roughness heights > 1.5 mm < 5 mm

Filled with filler at the factory

This is designed to level out major roughness heights > 1.5 mm and < 5 mm and is applied on top of the cured primer. The Wecryl 131 K scratch coat must be smoothed over the particle tips. Due to its good flow properties, Wecryl 131 K can be worked easily from a standing position using a floor squeegee (use the back side). Skim the material over the roughness heights, applying light pressure. Try to avoid skimming it off too closely over its particles. Wecryl 131 K comes already filled with filler at the factory, so you should not add any more filler. Bulking out the Wecryl 131 any further is not approved and will alter the product's properties. You should also never make a mortar out of the Wecryl 131 K. This is not approved and likewise will alter the material's properties. The application rate is 1.7 kg/m² per 1 mm of layer thickness.

Wecryl Surface Protection System OS F a

Roughness height x density = approximate application rate per square metre

Example: 3 mm x 1.7 kg/l = 5.1 kg/m²

Once the primer has hardened use Wecryl 885, Wecryl 810 or Wecryl 842 to level out any areas of damage, height differences or negative slopes. Please refer to the application guidelines for the substrate. Concrete repair in structurally significant areas (horizontal only) should be done with Wecryl 885.

Waterproofing layer

The primer and levelling layers must have hardened before the waterproofing layer can be applied.

In the first step, the details are waterproofed (e.g. kerbs or penetrations). The waterproofing is then applied to the main surface area.

Waterproofing of details without fleece reinforcement

Wecryl 240 thix

Waterproofing of upstand details is done in two applications. The details are waterproofed without fleece reinforcement, with at least 1.5 kg/m² being applied in each application.

An even layer of the mixed material (at least 1.5 kg/m²) is applied to the entire surface area with a sheepskin roller. The thickness of the layers can be checked using a layer thickness card. The wet layer thickness should be at least > 1200 µm per application. This will achieve the correct application rate and the required minimum dry film thickness of > 2 mm. Once the first waterproofing layer has cured completely, the second waterproofing layer can be applied using the same procedure.

Expansion joint waterproofing

Please refer to the "Detail interfaces" brochure for waterproofing different types of joints.

Waterproofing of main area, PESPL

Wecryl 240 - waterproofing without fleece reinforcement

The main surface area is waterproofed in a single layer, in one application. Apply a generous and even layer of the mixed material to cover the entire area (at least 2.4 kg/m²), distribute with a notched rubber squeegee (11 mm) and then immediately go over the surface with a spiked metal roller. Running the spikes through the still-liquid waterproofing helps to deaerate it and ensures that there are no air inclusions left in it. The notched rubber squeegee should be held upright, as this is the only way to ensure that the material is applied to the surface at the correct and required rate of 2.4 kg/m². When the waterproofing is applied on the sealer, check the notch height of the notched rubber squeegee after 400 m² because it will be worn down by the rough sealer. Flaws in the cured waterproofing can be overlaid afterwards without difficulty. The cured waterproofing must form an unbroken surface over the entire area.



Wecryl Surface Protection System OS F a

Protective layer

Wecryl 333 – self-levelling mortar with WestWood® Quartz Sand topping 0.7 - 1.2 mm and Wecryl 407

Use a notched or smoothing trowel to apply an even layer of the mixed self-levelling mortar (approx. 4.0 kg/m²) to the hardened waterproofing for the main surface area.

Top the newly applied self-levelling mortar with WestWood® Quartz Sand 0.7 - 1.2 in excess (approx. 7.0 kg/m²). Once the self-levelling mortar is fully cured, use a broom to sweep off the excess quartz sand, making sure that no loose grains remain on the surface. Finally use a hard rubber floor squeegee or an ordinary rubber squeegee to apply an even layer of Wecryl 407 Finish (approx. 700 g/m²). You can also then use a sheepskin roller to homogenise the surface.

Design options

WestWood® systems offer excellent scope for creative designs. Wecryl 407 can be used to create surfaces in one or more colours.

The products also allow any pattern or markings to be incorporated.

Cleaning the tools

If work is interrupted or when it is completed, clean the tools thoroughly with WestWood® Cleaning Agent within the pot life of the material (approx. 10 minutes). This can be done with a brush. The tools are ready to be used again as soon as the cleaning agent has evaporated fully.

Simply immersing the tools in the cleaning agent will not prevent the material from hardening.

Information on safety and risks

Please refer to the safety data sheets for the individual products.

General information

The preceding information, especially with regard to the application of the products, is based on extensive development work and many years of experience and is provided as the best of our knowledge.

However, the wide variety of requirements and conditions on site mean it is necessary for the installer to test the product to verify its suitability for the intended purpose. Only the most recent version of this document is valid.

We reserve the right to make changes to reflect advances in technology or improvements to our products.

Appendix

System drawing

Last revised: 01/01/2024

Wecryl Surface Protection System OS F a

Substrate

1 Concrete

Primer layer

2 Wecryl 821 (optional)

Wecryl 130

Wecryl 131 K (scratch coat)

Waterproofing PESPL – details

3 Wecryl 240 thix

4 Wecryl 240 thix

Waterproofing PESPL – main area

5 Wecryl 240

Protective and wearing layer

6) Wecryl 333

+ Quartz Sand topping 0.7 - 1.2 mm

+ Wecryl 407

7) Wecryl 407

