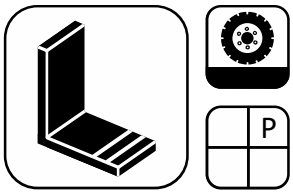
Installation guideline

Wecryl Surface Protection System OS 11a - Balcony version



Brief description

The Wecryl Surface Protection System OS 11 a – Balcony Version is a high-quality, flexible PMMA coating system that has been tested in accordance with German guidelines and standards TR-Instandhaltung, DAfStb-RiLi SI 2001 and DIN EN 1504-2. 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. Its outstanding crack-bridging properties make the system an economical and high-quality solution for balconies.

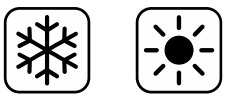
Properties and advantages

- Highly flexible and crack-bridging even at temperatures as low as -30 °C (Class B 4.2 – dynamic crack bridging as per DIN EN 1062-7) (Class A 5 – static crack bridging as per DIN EN 1062-7)
- Tested in accordance with class OS 11a as defined by German standard TR-Instandhaltung
- No embedded fleece or mesh required if laid in accordance with TR-Instandhaltung
- Reaction to fire classification C_{fl}-s1
- 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
- can be used as a coating system for balconies, pergolas, etc. in accordance with DIN 18531-5 (A)
- only suitable for concrete or screed substrates

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.

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Product	Temperature range, in °C		
Primer layer	**Air**	**Substrate***	**Material**
Wecryl 110	-5 to +35	-5 to +50*	+3 to +30
Wecryl 123 K	+3 to +35	+3 to +30*	+3 to +30
Wecryl 171	+3 to +35	+3 to +50*	+3 to +30
Wecryl 178	+3 to +35	+3 to +50*	+3 to +30
Wecryl 176 /176 K	+3 to +35	+3 to +50*	+3 to +30
WMP 113	+3 to +35	+3 to +50*	+3 to +30
WMP 174 S	+3 to +35	+3 to +35*	+3 to +30
Waterproofing of details			
Wecryl R 230 thix /-thix HT	-5 to +35	+3 to +50*	+3 to +30
Wecryl R 230 TT	-15 to +25	-10 to +30*	+3 to +20
Waterproofing of main area/ PESPL			
Wecryl 279	-5 to + 35	+3 to +40*	+3 to +30
Protective layer			
Wecryl 333	-5 to 35	-5 to +40*	+3 to +30
Wecryl 337	+3 to 35	+3 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/m²]		
Primer layer	Smooth substrate	Fine-sandy	Rough
Wecryl 110	Approx. 0.5	Approx. 0.6	Approx. 0,7
Wecryl 123 K			At least 1,7
Wecryl 171	Approx. 0.5	* **	* **
Wecryl 178	Approx. 0.5	* **	* **
Wecryl 176	Approx. 0.4	Approx. 0.5	Approx. 0.8
Wecryl 176 K	Approx. 0.8	Approx. 0.9	Approx. 1,0
WMP 113	Approx. 0.18		
WMP 174 S	Approx. 0.1 l/m²		

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* Roughness heights must be determined in accordance with RiLi-SIB (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 we recommend levelling out problem areas with Wecryl 123 K.

Application rates and curing times (continued)

Waterproofing layer	Waterproofing of details		
Wecryl R 230 thix / -thix HT /TT	At least 2.50 kg/m²		
WeFleece	Approx. 1.05 m²/m²		

Principally effective surface protection layer	Waterproofing of details	Waterproofing of main area (PESPL)	
Wecryl 279 (without embedded fleece)		At least 2.8 kg/m²	
Wecryl 279 (with embedded fleece)		At least 2.7 kg/m²	
WeFleece		Approx. 1.05 m²/m²	

Protective layer/wearing layer	On top of the main area waterproofing	
Wecryl 333	At least 4.0 kg/m²	
Wecryl 337	At least 4.0 kg/m²	
Wecryl 407	At least 0.7 kg/m²	
WestWood Chips	up to max. 0.05	

*Waterproofing of all details (e.g. wall junctions, joints) uses fleece-reinforced waterproofing with Wecryl R 230 thix, including WeFleece.

Product	**Drying time** (temperature dependent)			
	30 °C	**20 °C**	**10 °C**	**+3 °C**
WMP 113	At least. 1 hr.	At least. 2 hrs.	At least. 3 hrs.	At least. 4 hrs.
WMP 174 S	At least. 20 min	At least. 30 min	At least. 40 min	At least. 45 min

Product	**Curing time** (approx. values at 20°C)			
	Pot life	**Rain-proof**	**Overlayable**	**Fully cured**
Wecryl 110	12 min.	30 min.	45 min.	3 hrs.
Wecryl 171	10 min.	30 min.	30 min.	2 hrs.
Wecryl 176	10 min.	30 min.	30 min.	2 hrs.
Wecryl 176 K	10 min.	30 min.	30 min.	2 hrs.
Wecryl 178	10 min.	30 min.	30 min.	2 hrs.
Wecryl 123 K	12 min.	30 min.	60 min.	3 hrs.
Wecryl R 230 thix /-thix HT	15 min.	30 min.	1 hr.	3 hrs.
Wecryl R 230 TT (at 3 °C)	20 min.	45 min.	75 min.	6 hrs.
Wecryl 279	15 min.	45 min.	1,5 hrs..	3 hrs.
Wecryl 333	15 min.	30 min.	1 hr.	3 hrs.
Wecryl 337	15 min.	30 min.	1 hr.	3 hrs.
Wecryl 407	15 min.	45 min.	60 min.	3 hrs.

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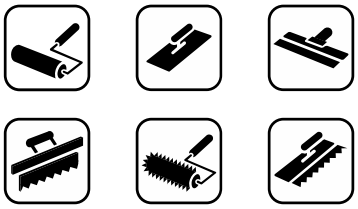
Application tools



Product	Application tool
Wecryl 110	Sheepskin roller
Wecryl 171	Sheepskin roller
Wecryl 176	Sheepskin
Wecryl 176 K	Smoothing trowel
Wecryl 178	Sheepskin roller
Wecryl 123 K	Smoothing trowel, smoothing spatula or rubber floor squeegee (be sure to apply an adequate amount)
WMP 113	Finish roller
Wecryl 279	Application without fleece (single layer): Notched rubber squeegee (12 mm), then spiked metal roller Application with WeFleece (wet-on-wet): 1st layer: sheepskin roller or notched rubber squeegee (5 mm), fleece reinforcement 2nd layer: sheepskin roller Application without fleece (layer by layer): 1st layer: notched rubber squeegee (6 mm), then spiked metal roller 2nd layer: notched rubber squeegee (6 mm), then spiked metal roller
Wecryl 333	Coating trowel with triangular teeth (notch pattern 92)
Wecryl 337	Coating trowel with triangular teeth (notch pattern S2)
Wecryl 407	Hard rubber scraper and finish roller
Wecryl R 230 thix /-thix HT /TT	Sheepskin roller

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 the DafStb guideline (2001 edition), "Part 3, Section 3.2.5 - Determination of roughness height" and Table 5.2).
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.

Primer layer surface

The primer is applied to the prepared substrate.

Wecryl 171 – low-viscosity primer for mineral substrates
Wecryl 178 – primer for absorbent, damp substrates
Apply the primer evenly with a sheepskin roller to produce a continuous film. Avoid creating puddles of primer.
Once the primer has cured, apply a second coat to cover any defects (bubbles, areas not fully covered).

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Wecryl 123 K – Scratch coat for increased roughness
The scratch coat is applied evenly with a smoothing trowel to form a film and then levelled off using a guide grain. Avoid accumulations of material. After hardening, any imperfections (bubbles, areas that are not completely closed) must be filled with a second coat.

Important note: Other primers are not approved for use with this system in accordance with TR-IH!

Primer layer detail

The primer is applied to the prepared substrate.

Wecryl 110 – Primer for asphalt
Wecryl 178 – Primer for damp substrates
Wecryl 176 – Primer for absorbent substrates
The primer is rolled on evenly with a fur roller to form a film. Avoid puddles forming.
After curing, any imperfections (bubbles, areas that are not completely closed) must be filled with a second coat.

Wecryl 176 K – Primer/scratch coat for highly absorbent mineral substrates
The primer is applied evenly with a smoothing trowel to form a film and levelled using a guide grain. Avoid accumulations of material.
After hardening, any imperfections (bubbles, areas that are not completely closed) must be filled with a second coat.

WMP 113 / WMP 174 S – Primer for metal
The primer is applied evenly to the substrate with a finishing roller or sprayed on thinly with a spray can.
Avoid material build-up and smooth out with a brush (especially in corners).

Levelling

Once the primer has hardened, any cracks, masonry joints, etc. must be levelled with Wecryl 810.

Waterproofing of details

Wecryl R 230 thix /-thix HT /-TT
Apply a generous and even layer of the mixed material to cover the entire area (at least 1.5 kg/m²), then immediately embed the WeFleece and use a sheepskin roller to remove any air bubbles. Immediately afterwards apply the remaining material (wet-on-wet, at least 1.0 kg/m²) up to the required total application rate (at least 2.5 kg/m²).
In each case a sheepskin roller is used to spread the material over the surface.
Fleece overlaps must be at least 5 cm wide.

Please refer to our drawings and computer animations for further information about waterproofing details (e.g. cutting the fleece sheet to size).

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Expansion joint waterproofing

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

Waterproofing of main area without embedded fleece

Wecryl 279 – waterproofing without fleece reinforcement
Apply a generous and even waterproofing layer of the mixed material over the entire surface (at least 2.8 kg/m²) with a 12-mm-notched rubber squeegee and then immediately go over the surface with a spiked metal roller.

Protective layer

Wecryl 333 /-thix 10 /-thix 20 /-Wi or Wecryl 337 – self-levelling mortar
The mixed self-levelling mortar is applied evenly to the hardened surface sealant using a notched trowel or smoothing trowel (approx. 4.0 kg/m²).

Waring layer

Depending on requirements, either Wecryl 407 with chips or quartz sand is applied as the wearing layer.

Wecryl 407 – Finish + WestWood Chips – Decorative sprinkling
This structure provides sufficient slip resistance for private areas while also being easy to clean with standard household cleaning products.

The mixed material Wecryl 407 (approx. 0.7 kg/m²) is rolled evenly onto the hardened self-levelling mortar using a finish roller. Avoid uneven layer thicknesses.
Immediately afterwards, WestWood chips are blown into the liquid finish using a funnel spray gun. Depending on the desired design, the coloured chips can be mixed beforehand and more or less chips can be applied as required. However, an excess of chips should be avoided, i.e. there should not be so many chips in any one place that a closed surface of chips is created.

Wecryl 407 – Finish + Quartz Sand
A quartz sand scatter with finish sealing provides greater slip resistance with greater roughness and is mainly used for escape routes in residential, commercial and parking buildings.
The quartz sand is sprinkled into the protective layer (self-levelling mortar) while it is still fresh. Once the self-levelling mortar has hardened, loose sand is vacuumed off and a final layer of finish is applied over the entire surface with a finish roller as a top seal.

To achieve a better appearance, the finish can also be applied with a hard rubber strip and smoothed with the finish roller.
Depending on the grain size of the grit, the finish consumption is approx. 0.80 kg/m².

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.

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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: 26 August 2025

System drawing

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Substrate

1 Concrete or screed

Primer layer

2 Wecryl 171 | 178

Waterproofing layer

(Waterproofing layer [PESPL] according to DAfStb guideline "Protection and repair of concrete components")

Waterproofing of details

3 Wecryl R 230 /-thix

4 WeFleece

5 Wecryl R 230 /-thix

Waterproofing of main area (PESPL)

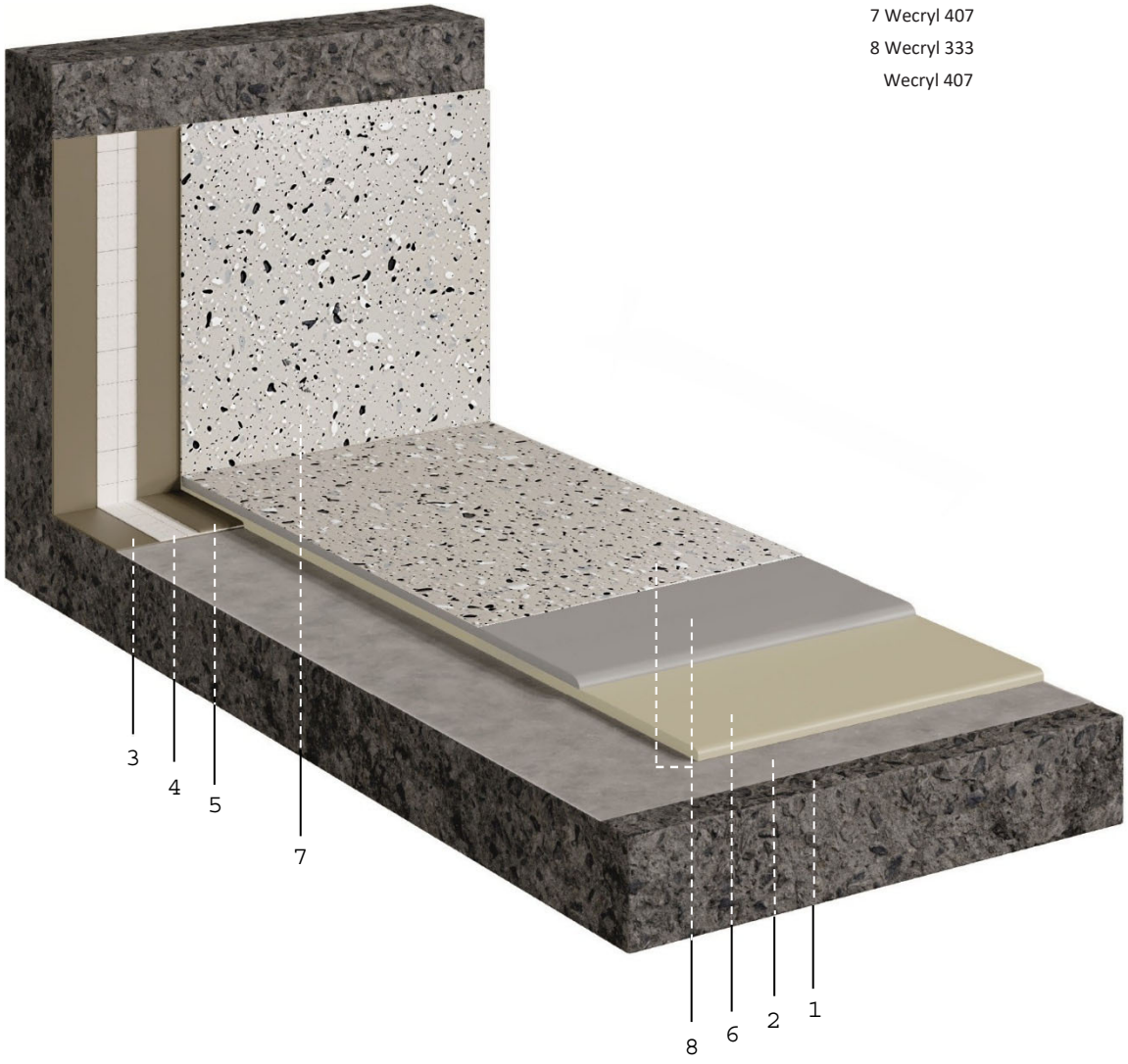
6 Wecryl 279

Protective and wearing layer

7 Wecryl 407

8 Wecryl 333

Wecryl 407



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