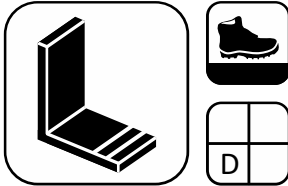


Wecryl Roof Waterproofing System



Brief description

The Wecryl Roof Waterproofing System with high-grade WestWood® PMMA-based resins is specifically designed as a highly durable waterproofing system for flat roofs.

Since it is applied as a liquid, it creates a seamless waterproofing system in which even the most complex roof penetrations can be reliably and durably incorporated. It is also extremely weather-resistant, crack-bridging, flexible at low temperatures and its surface can be finished in any desired colour.

Properties and advantages

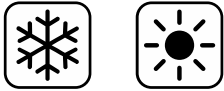
- CE certified in accordance with ETAG 005 at the highest possible performance levels
- Approved by the construction authority to DIN 18531 and the flat roofing guideline (ZVDH)
- Resistant to spreading fire and radiant heat in accordance with EN 13501-1, -5 with classification B_{ROOF}(t1) and E
- Seamless waterproofing with fleece reinforcement
- Liquid application ensures seamless incorporation and secure waterproofing of the most complex upstands
- Highly flexible and crack-bridging even at extreme sub-zero temperatures
- Permanently weather-resistant (resistant to high and low temperatures, UV rays, hydrolysis)
- Resistant to most commonly used acids and alkali solutions
- Fully bonded to the substrate, therefore no flow paths underneath for water
- Easy and fast application
- Can also be applied at sub-zero temperatures
- Can be applied to almost any substrate
- Solvent-free
- Root- and rhizome-resistant acc. to FLL
- Hard roof within the meaning of the national and regional building regulations

Applications

The Wecryl Roof Waterproofing System is used for creating highly durable waterproofing on flat roofs in new build developments and for refurbishment. The system is suitable for residential, commercial and industrial properties or for garages: wherever secure waterproofing with a long service life is desired.

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Application conditions



Temperatures

Application can generally be carried out within an ambient temperature range between +3 °C and +35 °C. Many products are also suitable for application at sub-zero temperatures. Please refer to the table below for exact details.

Product	Temperature range, in °C		
Primer layer	Air	Substrate*	Material
Wecryl 110	-5 to +35	-5 to +50*	+3 to +30
Wecryl 176 /176 K	+3 to +35	+3 to +50*	+3 to +30
Wecryl 198	-5 to +35	-5 to +50*	+3 to +30
Wethan 109	+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
Product	Temperature range, in °C		
Waterproofing layer	Air	Substrate*	Material
Wecryl R 230	-5 to +35	+3 to +50*	+3 to +30
Wecryl R 230 thix	-5 to +35	+3 to +50*	+3 to +30
Wecryl R 230 TT	-15 to +25	-10 to +30*	+3 to +20
Wearing layer			
Wecryl 488	-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. Reaction problems can occur at lower temperatures.

Moisture

The relative humidity must be ≤ 90%.

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

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

Consumption and reaction times

Product	Consumption [kg/m²]		
Primer layer	Substrate smooth	fine-sandy	coarse
Wecryl 110	approx. 0.5	approx. 0.6	approx. 0.7
Wecryl 176	approx. 0.4	approx. 0.5	approx. 0.8
Wecryl 176 K	approx. 0.8	approx. 0.9	approx. 1.0
Wecryl 198	approx. 0.4	approx. 0.5	approx. 0.8
Wethan 109	0.03 - 0.05	-	-
WMP 113	approx. 0.18	-	-
WMP 174 S	approx. 0.1 l/m²		
Waterproofing layer	Waterproofing	Covering layer	
Wecryl R 230 /-thix /HT /TT	min. 3.0	min. 1.5	
WeFleece	approx. 1.05 m²/m²	-	

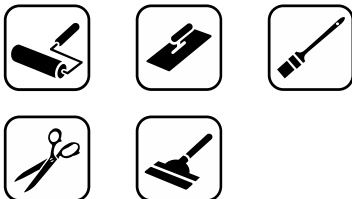
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Wearing layer	Substrate smooth	Sanded	
Wecryl 488	approx. 0.6	approx. 0.6 - 0.8	

Product	Drying time (temperature-dependent)			
	30 °C	20 °C	10 °C	+3 °C
Wethan 109	approx. 30 min	approx. 30 min	approx. 60 min	approx. 60 min
WMP 113	min. 1 hour	min. 2 hours	min. 3 hours	min. 4 hours
WMP 174 S	min. 20 min	min. 30 min	min. 40 min	min. 45 min

Product	Reaction time (approx. values at 20 °C)			
	Pot life	Rainproof	Overlayable	Curing time
Wecryl 110	12 min	30 min	45 min	3 hours
Wecryl 176	10 min	30 min	30 min	2 hours
Wecryl 176 K	10 min	30 min	30 min	2 hours
Wecryl 198	10 min	30 min	45 min	3 hours
Wecryl R 230 /-thix/HT	15 min	30 min	1 hour	3 hours
Wecryl 488	15 min	45 min	1 hour	3 hours
Product	Reaction times (approx. values at 3 °C)			
	Pot life	Rainproof	Overlayable	Curing time
Wecryl R 230 TT	20 min	45 min	75 min	6 hours

Application tools



Product	Application tool
Wecryl 110	Sheepskin roller
Wecryl 176 / Wecryl 198	Sheepskin roller
Wecryl 176 K	Smoothing trowel
Wethan 109	Brush
WMP 113	Finish roller
Wecryl R 230 /-thix /HT	Sheepskin roller
Wecryl R 230 TT	Sheepskin roller
WeFleece	Scissors
Wecryl 488	Finish roller or hard rubber blade (for topped surfaces)

Substrate preparation and primer selection

Correct substrate preparation and a flawless primer coating are essential for ensuring the functional durability of the WestWood® System.

Generally, the substrate must be sound, dry, and free from loose and adhesion-reducing particles. That is why coats of paint, cement slurry, dirt and grease, for instance, must always be removed completely. As a rule, this is done by shot blasting, scarifying or grinding and then vacuuming off the debris.

The primer coating then applied creates an ideal barrier and enables optimum adhesion between the substrate and the WestWood® System. Please refer to the Application Guidelines - Substrate for the correct substrate preparation and primer selection.

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Primer layer

The primer is applied to the prepared substrate.

Wecryl 110 – Primer for asphalt

Wecryl 198 – Primer for small details

Wecryl 176 – Primer for absorbent substrates

Use the sheepskin roller to apply an even film-forming coat of primer. Avoid creating puddles of primer.

Once the coating has cured, apply a second coat to cover any defects (bubbles, areas not fully coated).

Wecryl 176 K – Primer / Scratch-coat for highly absorbent mineral substrates

Apply an even and film-forming coat of primer with the smoothing trowel, using the particle size as a guide to the thickness of the layer. Any build-up of material should be avoided.

Once the coating has cured, apply a second coat to cover any defects (bubbles, areas not fully coated).

Wethan 109 – Primer for FPO / TPO roofing sheets

Brush-apply a thin coat of primer to the prepared substrate.

Always avoid any build-up of material and if necessary use a brush to spread this out (especially in corners).

WMP 113 / WMP 174 S – Primer for metal

Use a finish roller or a spray can to apply an even coat of the primer to the substrate.

Always avoid any build-up of material and if necessary use a brush to spread this out (especially in corners).

Levelling

Once the primer has hardened use Wecryl Surfacel, Wecryl 333 or Wecryl Mortar 842 to make good any areas of damage, height differences, broken or missing tiles or negative slopes. Please refer to the application guidelines for the substrate.

Waterproofing layer

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

The first stage involves waterproofing details (e.g. upstands, penetrations) and waterproofing of expansion joints. The waterproofing is then applied to the continuous area.

Waterproofing of details

Wecryl R 230 /-thix /HT/-TT – Waterproofing

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. Apply the remaining material directly (wet in wet) up to the required consumption rate.

In each case a sheepskin roller is used to spread the material over the surface.

Fleece overlaps must be installed with at least 5 cm overlap.

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

Waterproofing expansion joints

Wecryl R 230 /-thix /HT/-TT – Waterproofing

If existing expansion joints have to be waterproofed, apply a joint tape along the centre of the joint and then two layers of waterproofing with fleece reinforcement. If sealer is used as a finish, it must not be applied to the area above the joint tape. For further information please refer to the application guidelines for the Wecryl joint waterproofing system and our related drawings.

Waterproofing of continuous areas

Wecryl R 230 /-thix /HT/-TT – Waterproofing

The main area is waterproofed in the same way as the details and is integrated with the details' waterproofing with a fleece overlap of at least 5 cm.

Wecryl R 230 /-TT – Spray application

Spray application of these products is possible. It should be applied with the 98:2 spray technique and a liquid catalyst (e.g. Wekat 902) should be used as a catalyst. Due to the large number of manufacturers, machines and nozzle types, we recommend consultation with our application technology department as part of project planning.

Covering layer (optional)

Wecryl R 230 /-thix/HT /-TT – Waterproofing

In areas subject to increased chemical stress or for walkways (e.g. for maintenance work) an additional coating of waterproofing material (at least 1.50 kg/m²) should be applied once the waterproofing membrane has hardened.

Sealer (optional)

Wecryl 488 – Finish

Wecryl 488 can be used to increase dirt-repellency or for enhancing the design (coloured areas, markings, patterns, wording).

Use the finish roller to apply an even layer of the mixed material (approx. 0.6 kg/m²) once the waterproofing or covering layer has hardened. Avoid fluctuating layer thicknesses.

Increasing non-slip properties (optional)

Non-slip properties can be increased by topping the material with fire-dried quartz sand. The sand can either be applied to the covering layer while the resin is still wet, or to the fresh Finish (slip resistance up to R 12).

Once the material has hardened, vacuum off the loose sand and use a finish roller to seal the entire surface with a final coat of Finish.

For an enhanced appearance a hard rubber blade can also be used to apply the Finish before laying off with a finish roller.

Depending on the particle size of the topping, the consumption rate for the finish will be between approx. 0.60 and 0.80 kg/m².

Design options

WestWood® systems offer excellent scope for creative designs. Wecryl 488 can be used to create surfaces in one or more colours. The Finish also allows

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any pattern or markings to be incorporated. In conjunction with topping materials there are many additional design options.

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 products used.

General information

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

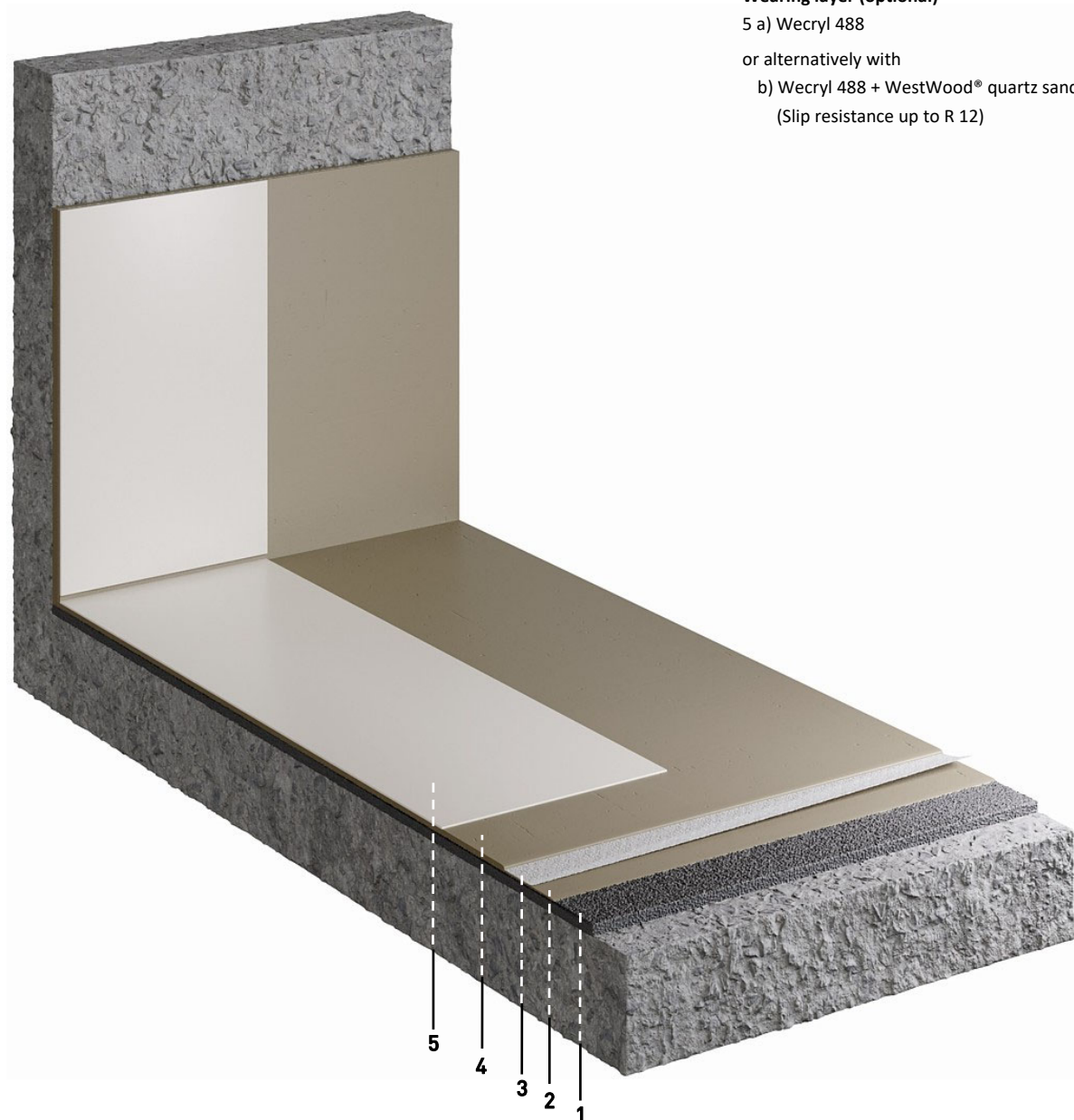
However, the wide variety of requirements and conditions on site mean that it is necessary for the product to be tested to ensure that it is suitable for the intended purpose. Only the most recent version of the document is valid. We reserve the right to make changes to reflect advances in technology or improvements to our products.

Appendix

System drawing

Rev. 01 February 2022

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Substrate

1 here: Bitumen sheets, non-absorbent, cleaned

Primer layer

None required on bitumen sheets

Waterproofing layer

2 Wecryl R 230 /-thix /HT

3 WeFleece

4 Wecryl R 230 /-thix /HT

Wearing layer (optional)

5 a) Wecryl 488

or alternatively with

b) Wecryl 488 + WestWood® quartz sand
(Slip resistance up to R 12)