PLASTIVO 180

PRODUCT DESCRIPTION

PLASTIVO 180 is a polymer-modified two-component thixotropic flexible waterproofing coating with CORE CURING TECHNOLOGY for an effective curing both in presence of low temperatures and partially damp surfaces.

PRODUCT APPLICATION

For negative/positive hydrostatic pressure waterproofing of wall surfaces, previously levelled with suitable VOLTECO mortars, or concrete, affected by slight settlements and/or movements.
Particularly suitable for:
• Surfaces and structures exposed to contact with water
• Balconies
• Ledges, concrete gutters, flower boxes (set-up anti-root protection beforehand) and wells
• Tanks, channels and structures also intended to contain drinking water, reinforced concrete foundation walls, pools, etc
• All indoor surfaces such as kitchens, bathrooms and showers even if made of gypsum board
• Dry floors

ADVANTAGES

• Quick curing that permits short application times between first and second layer and tiles application, even in the presence of low temperatures (within 48 hours)
• Effective curing on set surfaces, even partially wet
• Reduced risks caused by after application with rain, fog, other
• Suitable for contact with drinking water
• Anticarbonation protection with ”barrier” function
• Elastic up to -5°C
• Adheres to different types of surfaces (concrete, brickwork, brick, gypsum board, plastic, metal, ceramic, polystyrene, wood, other)
• Low environmental impact thanks to reduced CO_2 emissions, very low Volatile Organic Compound emissions (VOC), components obtained from recycling processes
• The product helps earning points for LEED certification

PREPARATION AND APPLICATION

Preparing the surfaces

Verify the structure suitability for the hydrostatic loads; if intended to contain water, perform a preload test.
Remove any dirt, oil, paint and any material or deposit that could compromise adhesion of PLASTIVO by pressure blasting, sandblasting or bush-hammering lightly.
The surface that is to be treated must be solid and perfectly clean from cement slurry.
Repair the surface with suitable VOLTECO mortar if the surfaces are very uneven, have gravel nests or in the case of mixed masonry.
If the surfaces are old or dusty, apply PROFIX 30 primer with a roller, a brush or by spray (see related technical data sheet).
For surfaces not totally dry but in which curing process is completed surface humidity must not be higher

than 8% (measured with a Storch electric hygrometer).

Construction joints, spacers, cracks and joints (positive hydrostatic pressure)
Connect the construction joints between the bed and the vertical wall by forming a 3x3 cm fillet with SPIDY 15 rapid-setting mortar.
Remove the spacers on both sides of the wall and plaster with SPIDY 15 rapid-setting mortar.
Connect all joints, any significant cracks and vertical or horizontal edges (even where there is the fillet) with a GARVO joint cover strip.

Construction joints, spacers, cracks and joints (negative hydrostatic pressure)
Seal the construction joints and cracks with AKTI-VO 201 mastic and/or BI FLEX system (see the related technical data sheets).
Seal any water inflow with TAP 3/I-PLUG quick-setting mortar (see the related technical data sheet).
Seal the spacers, piping and passing bodies with AKTI-VO 201 mastic.
Contact the Volteco Technical Service before intervening on the expansion joints.

Preparing the mixture
Stir the liquid component in its container, then pour it into a bucket.
Gradually add the powder while continuing to stir.
Use a whip-fitted drill with a low rpm and mix for approx. 3-5 minutes.
The mixture must be smooth and free of lumps.

Application
If PROFIX primer has not been applied, wet the surfaces making sure no surface water is formed.
PLASTIVO 180 must be applied in two layers with a roller, brush, squeegee or spatula.
Apply the first layer of PLASTIVO 180 on the surface, approximately 1 mm thick (average consumption: 1.5÷1.7 kg/m^2), making sure the product penetrates well into the substrate, in order to obtain uniform coverage.
If the roller/brush tends to drag the product, do not add water, dampen the surface instead.
The second layer, approximately 1 mm thick (average consumption: 1.5÷1.7 kg/m^2) must be applied after at least 2 hours (ambient temperature +20°C; ambient humidity 60%).
In any case, it is recommended to only apply the second coat when the previous one is dry and hardened.
The product can also be applied with a pneumatic pump or plastering machine with levelling wand.
The average thickness of approx. 1 mm per layer must continue to be applied according to the previous layers in applications that require a thickness greater than the standard 2 mm.

Sprayed application
Contact Volteco Technical Service for additional information.

FLEXONET reinforcement mesh
To improve elastic performance, in case of application in positive pressure (e.g. crazing with dynamic behaviour, in roof top pools and structures that are potentially subject to cracking), it is advisable to place the FLEXONET mesh FRESH ON FRESH on the 1st coat, pressing it down with a metal spatula until it is completely embedded.
The edges of adjacent sheets must overlap by 10 cm.
Where the horizontal and vertical surfaces join, make sure the FLEXONET mesh adheres to the horizontal edge of the previously laid GARVO joint cover.
Never fold the FLEXONET mesh vertically, always join it to the GARVO joint cover.
The FLEXONET mesh must be interrupted in the centre line of the GARVO strip when this covers expansion joints.

Curing
When waterproofing foundation walls, let it cure for at least 16 hours after application before backfilling.
When coating the waterproofing with any type of protective layer or finish (ceramic coating, protective screed, plaster, cement-based levelling compound, plastic drainage, etc.), let it cure at least 16 hours after application.
With low temperatures till +5°C wait almost 24 hours.
When waterproofing structures intended to contain water, allow a curing phase of at least 3 days once the product is applied.
When used in contact with drinking water, wash the surfaces with running water before filling the container.
The curing times can be longer in the presence of a low temperature, high humidity or premature contact with water.

Finishing

PLASTIVO 180

When applied indoors, it is recommended to coat the walls with the macroporous CALIBRO as an anti-condensation layer.
It is also possible to complete the finish with X-LIME.
The product can be finished with CRYSTAL POOL (see related technical data sheet) or ceramics, depending on the intended use.
Ceramics must be laid with a large grout gap and C2-type adhesive (preferably with an S1 and S2 deformation class).
The subsequent finishing plaster must be applied with CG2 class sealant cement-based mortar.




References available at www.volteco.com

CONSUMPTION AND YIELD

3÷3,5 kg/m^2 depending on the roughness of the surface.

PACKAGING AND STORAGE

PLASTIVO 180 is supplied in 20 kg packages (15 kg in powder + 5 kg in liquid).
The product must be stored in a dry place without being exposed to frost and heat (maximum temperature: 40 °C) or direct exposure to the sun before being applied.

WARNINGS - IMPORTANT NOTES

The product is not a vapour barrier.
The product must be used within 20 minutes after mixing.
Do not apply PLASTIVO 180 on water-soaked surfaces (see application).
Do not add water to the mixture or alter the mixing ratio.
Do not apply the produc if the temperature is higher than +30 °C or lower than +5 °C or if it is expected to drop below this temperature within 24 hours.
If more than 28 days have passed since the second coating, an additional layer must be applied to ensure the subsequent coating adheres well.
Preventively sample check adhesion to different surfaces such as cement, terracotta, brick, gypsum board, plastic, metal, ceramic, polystyrene, wood...
Protect wet product from rain.
Significant condensation may occur in environments with poor ventilation or high humidity.
Do not use PLASTIVO 180 for layers thicker than 1.5 mm.
Finishing with solvent-based paint could cause PLASTIVO 180 to degrade.
Verify compatibility by means of preliminary tests.
The datas of preparation and application refers to standard environmental conditions.

PHYSICAL AND TECHNICAL SPECIFICATIONS

Specification	Values
Appearance	Grey powder - white latex
Workability time at +20 °C	20'
Working temperature	-5 °C to +50 °C
Specific weight	> 1.6 kg/l
Liquid/powder mixing ratio	33/100

Specification	Test method	Performance requirements UNI EN 1504-2	Declared performance (*)	Certified performance (**)
Bond strength	UNI EN 1542	≥ 0.8 MPa	≥ 0.8 MPa	0,89 MPa
Resistance to accelerated ageing	UNI EN 1062-11	No swelling	-	fulfilled requisite
Capillary absorption	UNI EN 1062-3	≤ 0.1 kg*m^{-2}*h$^{-0,5}$	≤ 0.1 kg*m^{-2}*h$^{-0,5}$	≤ 0.1 kg*m^{-2}*h$^{-0,5}$
Water vapour permeability (equivalent thickness: Sd)	UNI EN 7783-2	Class 1 - Sd < 5 m	Class 1 - Sd < 5 m	Sd = 3.2 m
Permeability to CO_2 (equivalent thickness Sd)	UNI EN 1062-6	Sd > 50 m	-	Sd > 102 m

PLASTIVO 180

Specification	Test method	Performance requirements UNI EN 1504-2	Declared performance (*)	Certified performance (**)
Crack Bridging Ability	UNI EN 1062-7 (static method)	A2 > 0.25 mm A3 > 0.50 mm A4 > 1,25 mm A5 > 2.50 mm	-	Class A4 1,3 mm
Crack Bridging Ability (product + Flexonet mesh)	UNI EN 1062-7 (static method)	A2 > 0.25 mm A3 > 0.50 mm A4 > 1,25 mm A5 > 2.50 mm	-	Class A5 3.1 mm
Reaction to fire	UNI EN 13501-1	Classification	-	Class F

Specification	Test method	Performance requirements	Performance
Crack Bridging Ability (+23 °C)	UNI EN 14891 Met. A.8.2	> 0.75 mm	> 0.8 mm
Crack Bridging Ability (-5 °C)	UNI EN 14891 Met. A.8.3	> 0.75 mm	> 0.8 mm
Crack Bridging Ability (+23 °C) (product + Flexonet mesh)	UNI EN 14891 Met. A.8.2	> 0.75 mm	> 1,5 mm
Crack Bridging Ability (-5 °C) (product + Flexonet mesh)	UNI EN 14891 Met. A.8.3	> 0.75 mm	> 1,5 mm
Initial adhesion	UNI EN 14891 Met. A.6.2	> 0.5 N/mm²	> 1.2 N/mm²
Adhesion after immersion in water	UNI EN 14891 Met. A.6.3	> 0.5 N/mm²	> 0.9 N/mm²
Adhesion after heat application	UNI EN 14891 Met. A.6.5	> 0.5 N/mm²	> 0.5 N/mm²
Adhesion after un/freezing cycles	UNI EN 14891 Met. A.6.6	> 0.5 N/mm²	0,9 N/mm²
Tensile adhesion strength after contact with chlorinated water	UNI EN 14891 Met. A.6.7	> 0.5 N/mm²	0,9 N/mm²
Adhesion after immersion in alkaline water	UNI EN 14891 Met. A.6.9	> 0.5 N/mm²	> 0.5 N/mm²
Waterproof	UNI EN 14891 Met. A.7	150 KPa	150 KPa

Specification	Certifying body	Test method	Certified performance (**)
Impermeability in negative pressure (concrete structure Water/Concrete: 0.7)	IMM SA (Switzerland)	UNI EN 12390-8	8 Bar: no passage

Specification	Test method	Certifying body	Values (g/l)
VOC content	Directive 42/2004/EC ISO 11890-2 ASTM D 6886-12	Eurofins 392-2014-00057301	13

Specification	Certification
Suitable for contact with drinking water (Italian Ministerial Decree 174 of 06/04/2004: global transfer)	ELLETIPI Srl Report n° 14743/15
Suitable for contact with drinking water (Italian Ministerial Decree 174 of 06/04/2004: specific transfer)	CHELAB Srl Report n° 15/000206823
Tanks and water reserves waterproofing approval	SOCOTEC FRANCE S.A. Report (ETN) n° 601R0GAD6427 (31/08/2018)

The quoted data are obtained in a laboratory at +20 °C and 60% RH.
* Performance thresholds guaranteed by VOLTECO
** Performance values certified by accredited third parties

SAFETY

This is a non-toxic alkaline product.
It is recommended to use a mask and gloves while working.
Accidental contact with eyes, rinse thoroughly with water and seek medical advice.

PLASTIVO 180

CE	VOLTECO S.p.a Via delle Industrie, 47 - 31050 Ponzano Veneto (I)
10 0001-CPR-2016/09/01 1370-CPR-1299 EN 1504-2:2005 PLASTIVO 180 Protection systems of the concrete surface. Coating against the risks of penetration (PI), humidity control (MC) and increased resistivity (IR)	
Reaction to fire: Class F Water vapour permeability: Class I Carbon dioxide permeability: Sd ≥ 50 m Capillary absorption and permeability to water: < 0.1 $kg*m^{-2}*h^{-0,5}$ Adhesion: ≥ 0,8 N/mm^2 Thermal compatibility: • Part 1: Un/freezing cycles: NPD Crack bridging properties (method A): ClasseA4 Performance after exposure to the action of artificial atmospheric agents: Test passed Methods of conditioning before testing (7 days at 70°C): NPD Linear shrinkage: NPD Coefficient of thermal expansion: NPD Cross cut: NPD Slip resistance: NPD Antistatic behavior: NPD Adhesion on wet concrete: NPD Hazardous substances: See SDS	

CE	VOLTECO S.p.a Via delle Industrie, 47 - 31050 Ponzano Veneto (I)
14 0022-CPR-2017/07/20 EN 14891:2012 PLASTIVO 180 Two-component liquid waterproofing product modified with polymer (CM 01P) for outdoor applications and in pools under ceramic tiles(applied with class C2 adhesive in compliance with EN 12004)	
Initial tensile adhesion strenght: ≥ 0,5 N/mm^2	
Tensile adhesion strength after water contact: ≥ 0,5 N/mm^2	
Tensile adhesion strength after heat ageing: ≥ 0,5 N/mm^2	
Tensile adhesion strength after freeze-thaw cycles: ≥ 0.5 N/mm^2	
Tensile adhesion strength after contact with lime water: ≥ 0,5 N/mm^2	
Tensile adhesion strenght after contact with chlorinated water: ≥ 0.5 N/mm^2	
Waterproofing: No penetration and ≤ 20 g weight gain	
Crack bridging ability under standard conditions (23°C): ≥ 0,75 mm	
Crack bridging ability at low temperatures (-5°C): ≥ 0.75 mm	
Hazardous substances: See SDS	

LEGAL NOTES

Note for buyer/installer:
This document prepared by Volteco S.p.A. is provided as an aid and guideline for the buyer/installer.
This does not take into consideration the details of each single operational context, for which Volteco S.p.A. will not be held liable.
This does not change and does not extend the obligations of Volteco S.p.A.
It may vary and the installer is therefore required to update his/her information prior to each application by referring to www.volteco.com.
The before-after sales technical/trade information of the sales network have the same validity as this document.