



## DESMOPOL CB - SINGLE COMPONENT, PITCH BITUMEN MODIFIED POLYURETHANE WATERPROOFING MEMBRANE

DESMOPOL CB is a single component liquid made up from pure polyurethane modified with pitch bitumen, which once catalyzed forms a continuous, aromatic, elastic membrane, without any joints, overlapping or any integrated mesh needs. Its properties make it an excellent choice for achieving air-tightness and perfect waterproofing on a multitude of surfaces and substrates.

### USES

Liquid membrane to use in these waterproofing situations:

- roofs, terraces, balconies and overhangs (walkables)
- structural concrete slabs
- concrete walls and foundations

**NOTE:** call our technical department about the application to other supports or situation

recommended thickness	± 1,5~ 2 mm.
dry time at 23°C	± 5~6 hours
elongation at break at 23°C	>600%
tensile strength at 23°C	± 2,3 MPa
application methods	By roll, brush or airless equipment
widespread systems	± 2 thin layers by roll or brush to achieve the recommended thickness



### COLORS

	Black
---	-------

### GENERAL FEATURES

- DESMOPOL CB is a highly elastic and wear-resistant membrane that, once applied, offers great stability, durability and waterproof
- Thanks to its versatility DESMOPOL CB adapts to any surface, making it the ideal product for application on uneven surfaces and in areas of any shape, whether curved or squared.
- No surface reinforcement is required, only singular points of encounters with other building elements.
- Green roof application
- Applying DESMOPOL CB saves in seals and any other kind of joints, as the finish is uniform and makes up a single layer, providing a surface with optimum maintenance and cleaning properties.
- The DESMOPOL CB polyurethane membrane system should be applied in dry conditions avoiding the presence of humidity or water coming from the surface to be coated or the substrate, whether at the time of application or subsequently (pressure from phreatic water level).



- If there is humidity or moisture in the substrate at the time of application, check the technical specifications of our primers where the maximum support humidity ranges are specified.
- The DESMOPOL CB requires solar radiation protection (UV rays) because is an aromatic membrane, so, in the absence of other physical protection elements, we recommended the application of our polyurethane colored resis TECNOTOP 2C.
- DESMOPOL CB system's properties enable it to bond to any surface, such as cement, concrete, polyurethane foam, butyl and bituminous sheets wood, polyurethane plates, metal, etc.
- DESMOPOL CB is immune to temperature changes of between -40°C and +70°C, conserving its elastic properties.
- The DESMOPOL CB polyurethane membrane is a self-leveling membrane that requires additives for its application on vertical and sloped surfaces more than 1,5% of gradient. Mix DESMOTHIX maximum ratio 1 liter for each 25 kg of DESMOPOL CB. You could apply on thin several layers too..

## YIELD

Product yield is 2,1 to 2,8 kg/m<sup>2</sup> with a thickness of 1,5 to 2 mm(aprox. data) applied on various coats; each coat yield 1 kg/m<sup>2</sup> maximum

## PACKAGING

Metal tins of 25 kg. each

## SHELF LIFE

12 months at temperatures between 5°C and 35°C, provided it is stored in a dry place. Once the tin has been opened, the product must be used immediately.

## SURFACE PREPARATION

In general, you should take the following factors:

- Surface reparation ( fill the cracks and fissures, remove old existing waterproofing paints...).
- Clean up the surface, removing dust, oils and grasses, and existing chippings.
- Support will be strong and dry.
- The supports must be firm and dry. No moisture or humidity inside or by capillarity from the backfill.

You can apply DESMOPOL CB liquid waterproofing membrane over several supports and materials. Below we set out some of the application for the most common surfaces; for other surfaces not described, please call our technical department.

### Concrete substrate

- The concrete should be completely cured (concrete curing takes 28 days) or, in any case, the maximum level of humidity allowed for the substrate should be verified, depending on the primer used.
- Any concrete latencies or release agents should be eliminated and an open pore surface achieved by grit blasting, milling or sanding.
- Any cracks, and damaged areas must be repaired using a epoxy mortar, mixing our epoxy resin PRIMER EP-1020 with silica sand (ratio of  $\pm 1:4$ ), or the same resin mixed with calcium carbonate (ratio of  $\pm 1:2$ ).
- MASTIC PU must be used on fissures or small cracks in the surface.
- 



Existing joints or seals:remove the old material, clean up and fill with MASTIC PU and TECNOBAND 100 matting.

- Next one, clean up well and eliminate all contaminants from the elements, such as dust or chippings, using dry methods preferably.
- Apply the primer in the conditions and the parameters indicated in the technical specifications for these products. On concrete, we recommended the two-component polyurethane resin PRIMER PU-1050 / PRIMER PU-1000 / PRIMER PUC-1050. See the TDS of each product before the application
- Apply DESMOPOL CB membrane depending on the chosen type (see "application types")

## APPLICATION

Once the surface preparation and primer application are done, as conditions, proceed to extends of the polyurethane membrane, using this following method:

### By layers application (traditional or classical application ):

- Open the DESMOPOL CB metal tin and stir up to homogenize
- Extended a first layer using a short hair roller, maximum thickness 0,8-1,0 mm, (applying the material without dilution)
- Wait for complete drying (depend on the weather conditions), about 5~6 hours
- Then, apply the next layer, in the same way as above
- Repeat this process as many times as necessary to achieve the desired or recommended thickness.

### Single coat application (mixing DESMOPLUS):

- Pour DESMOPLUS inside the DESMOPOL CB metal tin, always in the fixed ratio supplied by the manufacturer. Continuous mixing with medium-speed mechanical equipment (pot life:  $\pm$  25 min.).
- Pouring of the material formed directly on the support, and spread using Use of trowel, squeegee or rubber lip. (roll can also be used too).
- This process is unique, whereby the desired thickness is obtained in one operation, eliminating intermediate waiting times, ensuring the formation of the membrane without internal bubbles, getting more tensile strength and reducing the global drying time.
- The use of mechanical equipment mix it's not recommended when DESMOPLUS is used.
- Don't add DESMOTHIX when DESMOPLUS is used.
- Check all the waiting and drying times, application conditions (see the TDS)

### Notes:

- Consult in all cases the waiting times, drying time, singular points traitment, conditions of application of all the products through the technical data sheets of each product or consult our technical department.
- For other types of supports/substrates, for further information on the execution application procedure, for any additional questions, please, consult the technical data sheets (TDS) of these products, or our technical department.
- These guidelines are valid although they can be modified, according to the situation of the supports, conditioning of the bearing structures of the elements to be waterproofed, external climatology or situation at the time of application

## REPAIR AND OVERLAPS PROCESSES

### REPAIR

In cases where the membrane repair by accidental causes, or assembly procedures not covered installations that require drilling on polyurethane membrane DESMOPOL CB, the procedure is required, shall be as follows:



- cut, removal of the affected area and / or damaged surface
- sanding this area extending about 20–30 cm. around the perimeter, for overlapping security
- cleaning (vacuuming) of waste generated (powder, dust...); if it's possible don't use water, and if used, support humidity value; ketones applicability based solvents for reducing this type of surface cleaning
- apply thin layer ( $\pm 80$  g/m<sup>2</sup>) of polyurethane resin PRIMER PU-1000
- light spread SILICA SAND over the wet primer applied before
- wait for the total drying
- apply DESMOPOL CB with DESMOPLUS
- apply TECNOTOP 2C, in consumption and desired thicknesses in the case of no protection against UV rays. This application can be done by short hair roller type equipment "airless" (see the conditions of application in the product data sheet TDS)

### OVERLAPS

In cases has been exceeded recoat time (48~72 hours), so the waiting time between jobs is prolonged, proceed as follows:

- sanding strip longitudinal overlap of about 20–30 cm. wide
- cleaning (vacuuming) of waste generated (powder, dust...)or existing dust; if it's possible, do not use water, and if it's used, check the support humidity value; ketones applicability based solvents for conducting this type of surface cleaning
- apply thin layer ( $\pm 80$  g/m<sup>2</sup>) of polyurethane resin PRIMER PU-1000.
- light spread SILICA SAND over the wet primer applied before
- wait for the total drying
- apply DESMOPOL CB with DESMOPLUS
- apply TECNOTOP 2C, in consumption and desired thicknesses in the case of no protection against UV rays. This application can be done by short hair roller type equipment "airless" (see the conditions of application in the product data sheet TDS)

### HANDLING

These safety recommendations for handling, are necessary for the implementation process as well as in the pre-and post, on exposure to the loading machinery.

- Respiratory Protection: When handling or spraying use an air-purifying respirator.
- Skin protection: Use rubber gloves, remove immediately after contamination. Wear clean body-covering. Wash thoroughly with soap and water after work and before eating, drinking or smoking.
- Eye / Face: Wear safety goggles to prevent splashing and exposure to particles in air.
- Waste: Waste generation should be avoided or minimized. Incinerate under controlled conditions in accordance with local laws and national regulations.

Anyway, consult the material and safety data sheet of the product (MSDS), or contact our technical department.

### COMPLEMENTARY PRODUCTS

The DESMOPOL CB system may be complemented with the following products as a means of protection or to improve its physical-mechanical properties depending on its exposure, the desired finish or the type of substrate.

- PRIMER EP-1020: mixed with silica sand (ratio $\pm$ 1:4), or calcium carbonate (ratio $\pm$ 1:2) this is used to fill in depressions in concrete surfaces, rapidly providing a firm and fast drying even base.
- PRIMER PU-1050 | PRIMER EPw-1070 | PRIMER PUc-1050 | PRIMER PU-1000: These primers are applied on the substrate beforehand to improve bonding and level the surface, as well as regulating the humidity in the substrate (see permitted levels in their technical data sheet).
- PRIMER EP-1040: 100% solid content, epoxy resin, for metal surfaces



- TECNOTOP 2C: two-component colored aliphatic polyurethane resin used to protect roofs and floors or ground against UV rays when there is no other protection.(according ETA 10/0121 and BBA 16/5340)
- TECNOTOP S-3000: two component, aliphatic ,colored, cold polyurea resin for protection against UV rays, in situations of decks or floors without additional protection. Excellent for vehicular cover applications, quick drying and setting up.
- TECNOPLASTIC F/C: this plastic powder, once mixed with TECNOTOP 2C , forms a rough surface, conforming even to norm ENV 12633: 2003(floors slipperiness), to achieve Class 3 (>45 slip resistance), depending on dosage (consult our technical department).
- DESMOPLUS: additive that allows the application of the membrane DESMOPOL CB IN A SINGLE-USE. Specially in applications on humid or cold climatologies, improve mechanical properties, and reduces the membrane's drying and curing time(see TDS)
- DESMOTHIX: additive that provides thyrrotrophic properties, specifically designed to be mixed with DESMOPOL CB to enable application on vertical surfaces.
- TECNOBAND 100: cold bond deformable band made up of an upper layer of non-woven textile and lower layer of viscose self-adhesive coating, which together allow it to adapt to the shape of the substrate. This band is ideal when dealing with structural joints and overlapping metal materials.
- MASTIC PU: polyurethane mastic for filling joints and fissures (use together with TECNOBAND 100 when necessary).

**NOTE:** see all the TDS of all products, or consult our technical department

## TECHNICAL DATA

PROPERTIES	VALUES
Specific gravity at 23°C ISO 1675	1.450 ±5% kg/m <sup>3</sup>
Viscosity at 23 °C ISO 2555	2.650 ±200 cps
Solid contents ISO 1768	>86% ±2
VOC(volatil organic compounds)	238 g/l
Tensile strength at 23°C ISO 527-3	±2,3 MPa
Elongation at break at 23°C ISO 527-3	>600%
Roof slope	zero slope
Fire reaction	Euroclass F
Anti roots	YES
Hardness Shore A at 23 °C DIN 53.505	>80
Concrete adherence at 23°C	>2 MPa

The values in this table are approximate and can vary depending on the situation of the support or application methodology employed

NOTICE: While all the information presented in this document is believed to be reliable and to represent the best available data on these products, do not constitute sales specifications. The product properties may be changed without notice. NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE. IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE. Liability of Tecnopol Sistemas and its affiliates for all claims is limited to the purchase price of the material. Products may be toxic and require special precautions in handling. User should obtain detailed information on toxicity, together with proper shipping, handling and storage procedures, and comply with all applicable safety and environmental standards. No freedom from any patents or other industrial or intellectual property rights is granted or to be inferred.

