

TECNO MAGAZINE

by TECNOPOL

desmopol·dw DRINKING WATER

Polyurethane membrane designed and approved for contact with water destined for human consumption



NEW



CASE STUDIES. Banco de Costa Rica Parking Lot, Global Park Free Zone



TC2049

TC-2049: The first TECNOPOL spray equipment for polyurea and polyurethane.



tecnofloor
FLOORING SYSTEMS

FLOORING INDUSTRIAL CONTINUOUS FLOORS

TECNOFLOOR continuous industrial floorings are designed to meet the most demanding requirements of intensive use.

We have developed this range of flooring specifically for applications requiring a durable, resistant and visually attractive finish.



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desmopol·dw

DRINKING WATER



Polyurethane membrane designed and approved for contact with water destined for human consumption

Desmopol DW. The polyurethane approved for contact with water destined for human consumption

The DESMOPOL range of polyurethane membranes continues to grow; just recently we introduced the new DESMOPOL CB, a modified polyurethane elastomer with one component bitumen, now it's the turn of the new DESMOPOL DW (named after the initials of "drinking water"), specifically designed for use in situations where the membrane will inevitably come into contact with water designed for human consumption.

The Tecnopol R+D team has been working hard on the development of this membrane for more than a year, and after numerous tests, they have successfully perfected the formula which now meets all our exacting internal quality standards and with which we are fully satisfied.

The quality tests are designed to determine the suitability of the product in terms of the following mechanical properties: elongation, adherence, viscosity, tensile strength, etc.

After completion of the first phase of testing, we then proceeded to the second stage to

determine whether the product complies with the requirements of the purpose for which it is ultimately intended, namely, in this case, contact with drinking water. After several months of rigorous testing it was confirmed that there was no transfer of membrane particles to the water, after which the product was sent to the NSF laboratories in the UK to undergo the official test procedures for formal approval and certification of use.

DESMOPOL DW has now successfully passed all the tests conducted at the UK based NSF laboratories, and has been duly granted the certificate for use on surfaces designed for contact with water destined for human consumption.

Results were excellent on all the test certificate procedures, which included the following:

- Smell and taste of the water (unchanged)
- Appearance of the water (unchanged)
- Growth of aquatic microorganisms (no signs detected)
- Release of potentially harmful or toxic substances (no signs detected)
- Release of metal traces (no signs detected)



DESMOPOL DW passed all the tests conducted by the NSF laboratories and is now officially classified as safe and suitable for use in contact with water destined for human consumption.





RANGE

WE HAVE EXPANDED OUR PRIMER RANGE WITH A VARIETY OF NEW RESINS.

WE WILL GO ON TO EXPLAIN THEIR PROPERTIES AND HOW TO SELECT THE ONE BEST SUITED FOR EACH TYPE OF USE.

Buying a suit off the peg in a large store is not the same as one made to measure from a tailor. We could go out dressed in either, but if we expect it to fit perfectly, just like a glove, we would have to opt for the second.

The same is largely true with primers; if we want the job to be finished perfectly and avoid problems in the future we need to select the right product, designed for the type of surface, the prevailing climatic conditions and the system employed. In other words we need to select a primer that has been "tailor made" for our specific needs.

We have developed a range of resins with different properties to maximize adherence to all types of surface, porous or non-porous, and in different temperature and humidity conditions, designed to facilitate the application of all our membranes and flooring systems.



WHICH PRIMER DO I NEED?

PRIMER PU-1000 Resin suitable for repairs and overlaps	PRIMER EP-1040 Maximum adherence on systems used on metal
PRIMER PU-1050 The best option for concrete	PRIMER EPw-1070 All types of surfaces in medium-damp conditions
PRIMER PUc-1050 For concrete in cold environments	PRIMER WET Porous surfaces subject to maximum damp
PRIMER EP-1020 Resin ideal for epoxy systems on concrete	PRIMER T For use in totally transparent systems

CHIEF PROPERTIES OF THE PRIMER RANGE

	primer PU-1000	primer PU-1050	primer PUc-1050	primer EP-1020
Componentes	1	2	2	2
Product base	Polyurethane base solvente	Polyurethane 100% solids	Polyurethane 100% solids	Epoxi 100% solids
For supports	porous	porous	porous	porous
Viscosity	120 cps	450-A / 900-B cps	450-A / 900-B cps	250 cps
Initial drying time	60 minutes	60 minutes	60 minutes*	60 minutes
Recoat time	3 ~ 24 hours	3 ~ 24 hours	3 ~ 24 hours*	3 ~ 48 hours
Maximum surface dampness	5 %	5 %	5 %	5 %

	primer EP-1040	primer EPw-1070	primer WET	primer.t CLEAR
Componentes	2	2	2	1
Product base	Epoxi 100% solids	Epoxi water based	Epoxi 100% solids	alcohol based
For supports	porous / non-porous	porous / non-porous	porous	non-porous
Viscosity	850 cps	3.500 cps	-	40 cps
Initial drying time	2 hours	4 ~ 5 hours	1 hours	20 minutes
Recoat time	3 ~ 24 hours	6 ~ 48 hours	3 ~ 24 hours	-
Maximum surface dampness	15 %	8 %	98 %	5 %

TECHNOLOGY

TC2049

The first TECNOPOL spraying equipment for polyurea and polyurethane.

The new TECNOPOL SPRAY EQUIPMENT division was launched in order to offer a comprehensive solution for our clients, by developing and providing the ideal tools and equipment for applying our range of TECNOPOL polyurethanes and polyureas.

The new TC2049 hydraulic dosing unit has been designed and manufactured to satisfy the most demanding application requirements of polyurea and polyurethane two component systems for which high precision is needed in order to ensure the quality of the mixture.

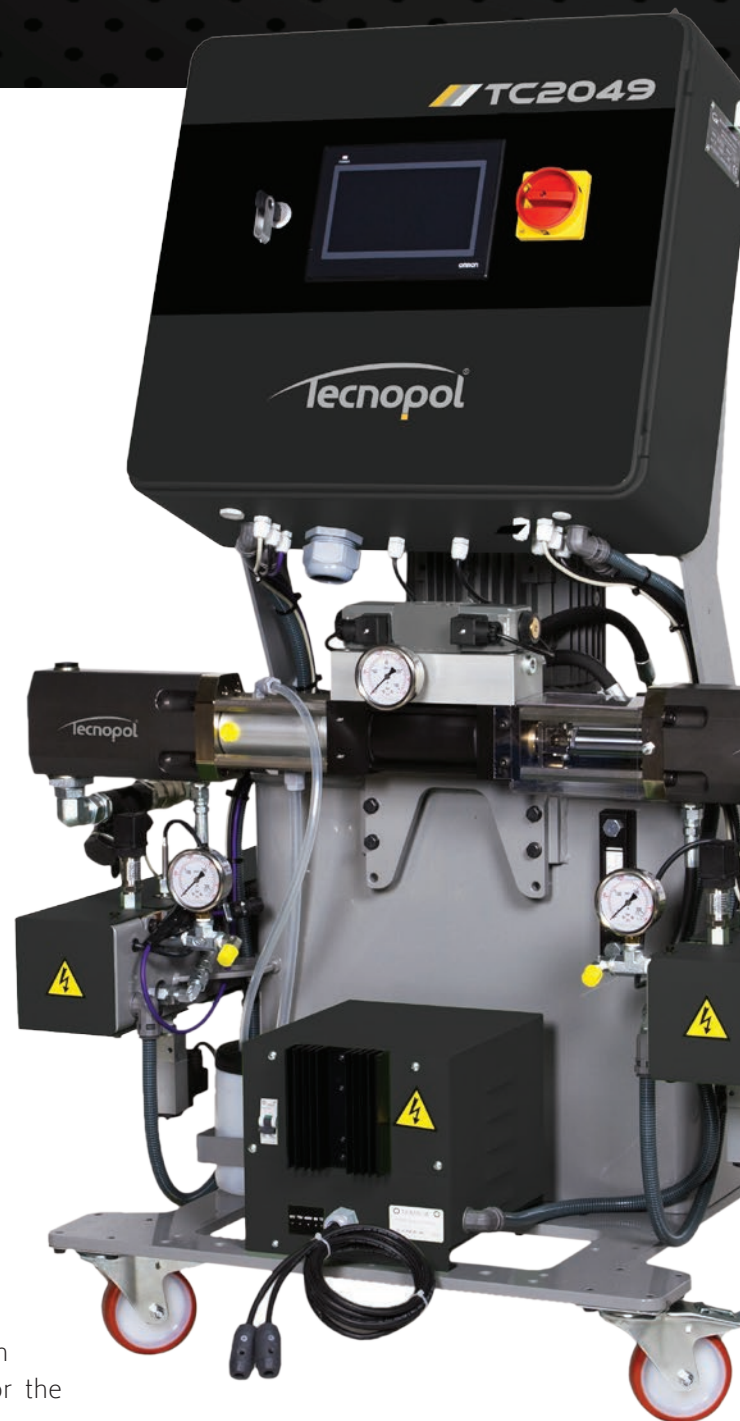
Its open design allows easy access to all the components to simplify maintenance operations.

THE "RECIPES" SYSTEMS

Application of the TECNOPOL product range has never been easier or more reliable.

Precise adjustment with just one click is the essential design premise of this new piece of equipment. The TC2049 comes with preset temperature and pressure parameters for the whole range of TECNOPOL membranes and foams under the heading "recipes".

Once a recipe is selected, the equipment automatically sets the temperature and pressure parameters for both components according to the specifications required for the product to be applied.



TECHNICAL SPECIFICATIONS

Max. Output ratio 1:1 @ 160 Bar (2333 psi) 12 Kg/min (27 lb/min)

Motor Power: 4 Kw

Heating Power: (2 x 6 Kw) 12 kW

Hose Transformer Power: 3 Kw

Total Power: 19 kW

Electrical consumption: 38 A @ 3 x 400 V / 66 A @ 3 x 230 V

Maximum hose length: 93 m/310 ft

Recommended compressor: 3 HP

Weight (hydraulic tank empty): 235 Kg

Weight (hydraulic tank full): 300 Kg

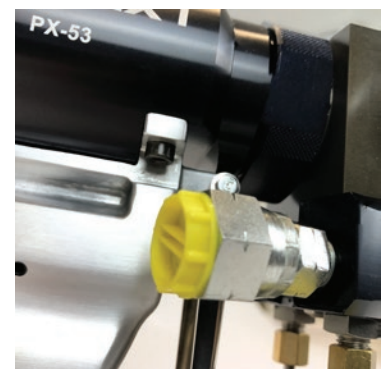
H: 1200 mm/47 in W: 945 mm/37 in L: 745 mm/29 in



Need more information on this equipment?

Give us a call and one of our technical team will be glad to assist (+34) 93 568 21 11





PROMIX I

Together with the TC-2049 we have also developed our PROMIX air purge gun.

The design principle of the gun is also based on simplicity of use and maintenance, making the application of our products ever easier in order to achieve consistently better results.

TECHNICAL SPECIFICATIONS

Maximum working pressure: 246 Kgf/cm² (24 MPa) / 3500 psi

Air pressure required: 6-8 Kgf/cm² (0.6-0.8 MPa) / 85-114 psi

Maximum production ratio 1:1: 18 Kg/min / 40 lb/min

Minimum production ratio 1:1: 1.5 Kg/min / 3.3 lb/min



A GOOD END RESULT STARTS WITH A GOOD PRIMER

The TECNOPOL PRIMER range offers the perfect solution for all of your waterproofing jobs.



- **Whatever surface**
Resins for both porous and non porous surfaces: concrete, cement, metal, wood, etc.
- **Versatility and maximum quality**
Choose between, solvent, water-based or 100% solid, according to the requirements of your particular project.
- **Damp surfaces**
Resins for surfaces with up to 98% residual damp.



PRACTICAL TIPS PIN-HOLES, WHAT THEY ARE AND HOW TO PREVENT THEM.

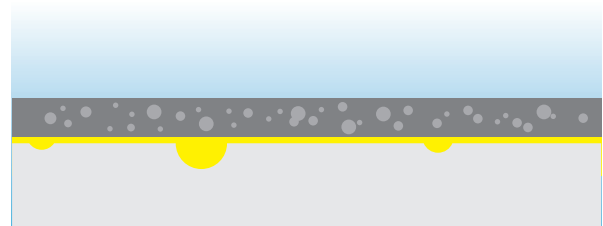
PINHOLES are small craters which form in the applied product during the drying process and which, apart from an aesthetic problem, can also cause functional difficulties, especially in waterproof membranes as they can adversely affect the resistance and efficiency of the coating.

PIN-HOLES THROUGH AIR OR SOLVENT TRAPPED INSIDE THE MEMBRANE

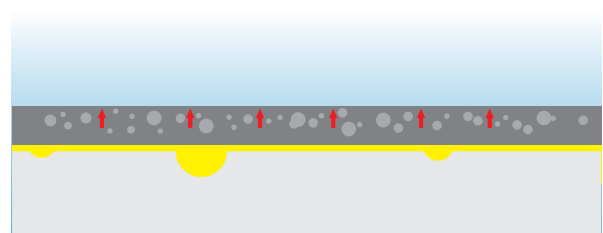
When membranes are applied which contain solvents it is important to apply thin coats to prevent the appearance of pin-holes. The reason for this is that solvents are very volatile and tend to rise once the membrane has been applied. With a thin coat this is not a problem; the solvents will evaporate more, but if the coat is very thick, apart from a greater concentration of solvents, they will not have time to escape and will remain trapped inside the membrane forming bubbles in the surface. In some cases these bubbles may actually break through the surface, causing the appearance of pin-holes.

In the case of DESMOPOL polyurethane membrane, we can completely eliminate the risk of the appearance of pin-holes or bubbling with the addition of DESMOPLUS. This additive allows the application of DESMOPOL in a single coat with the desired thickness, producing a completely smooth finish with no bubbling or pin-holes.

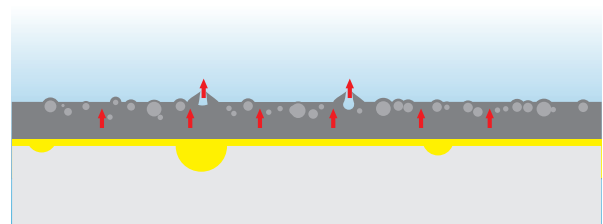
This same problem can occur if the product is foam based or contains air. This is usually due to over energetic stirring of the product. To prevent this we simply need to take the precaution of stirring the product on a slow speed and, if possible, with a basket shaped head.



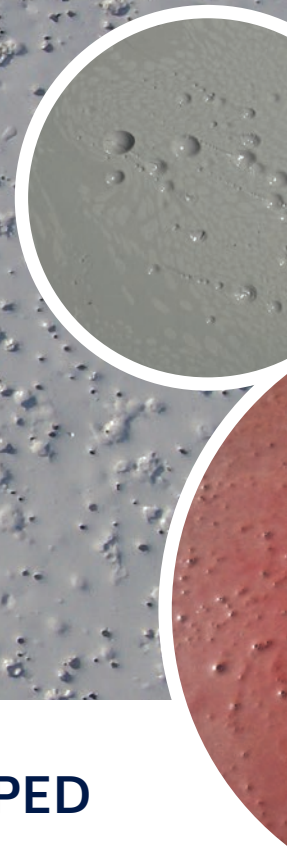
Membrane containing air or solvent vapour



The vapour tends to rise due to its low density



Bubbling or pin-holes can form on the surface





PIN-HOLES THROUGH **TRAPPED AIR BELOW** THE MEMBRANE

If one applies a polyurea or polyurethane membrane, using spraying equipment, directly onto an untreated or inadequately prepared surface, one is bound to end up with air trapped under the membrane.

This air is less dense than the product which contains it, and while the latter is drying, the trapped air rises to the surface and may cause the feared pin-hole effect.

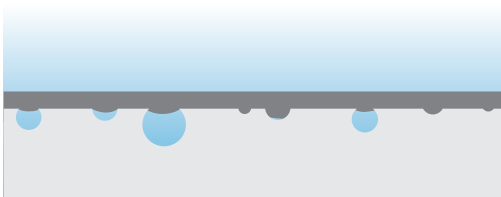
This same phenomenon occurs when a primer is not applied or the coat is too thin or insufficient.

With the application of hot membranes the drying process is much shorter, which might lead us to believe that the air would not have time to escape, however the membrane temperature in fact also warms the air, making it rise faster, also causing the pin-hole effect.

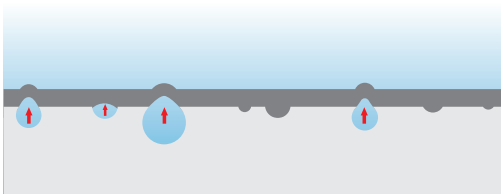
POOR OR INADEQUATE PREPARATION OF THE SURFACE



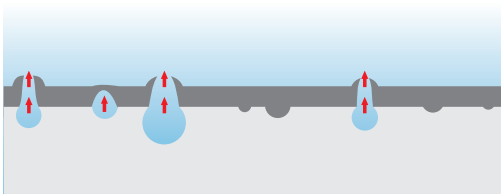
Poor preparation of the surface, which results in cavities and irregularities



Air is trapped in the irregularities

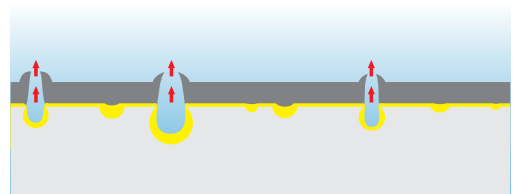
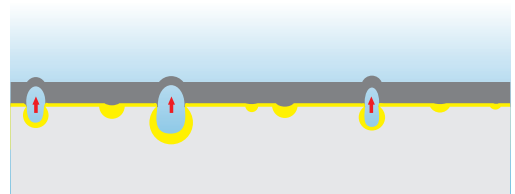
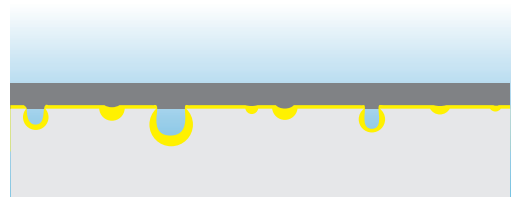
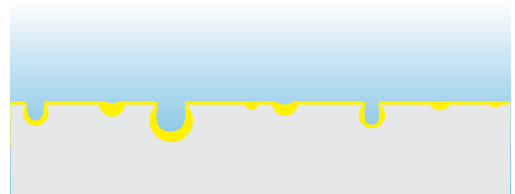


Air being less dense tends to rise



Finally the air manages to break through the membrane and causes a pin-hole

INSUFFICIENT PRIMER COAT

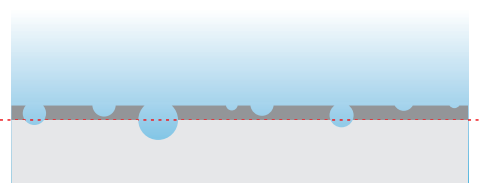


THE 4 BASIC TIPS FOR PREVENTING PIN-HOLES

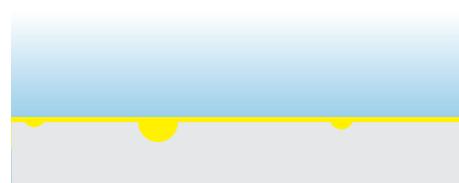
1 Always stir the product at low speed and with a "basket" type head



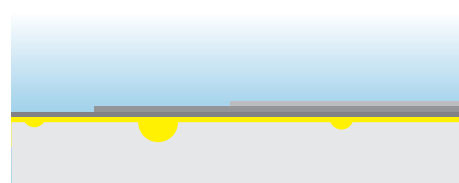
2 Always correctly prepare the surface to leave it as smooth as possible. Ensure there are no cracks, cavities and other irregularities.



3 Correctly prime the entire surface, using one or more coats, to ensure that it is as flat and smooth as possible.



4 When not using the DESMOPLUS additive, which allows application in a single coat, always apply several thin coats.



desmo**plus**

1 LAYER

SPECIAL ADDITIVE FOR DESMOPOL

- Allows the application of the DESMOPOL membrane in a single coat
- Improves the mechanical properties of the product
- Eliminates the risk of bubbles appearing
- Reduces the initial drying time to less than 1.5 hours.



CERTIFICATES

DESMOPOL DW OBTAINS THE CERTIFICATE FOR CONTACT WITH DRINKING WATER.

The new DESMOPOL DW has successfully passed all the tests conducted by the UK based NSF laboratories, officially certifying that DESMOPOL DW is suitable for use on surfaces in contact with water destined for human consumption.



DESMOPOL OBTAINS THE ANTI-ROOTS CERTIFICATE.

Membrane with guarantees for the construction of green roofs, an ever more common feature in architectural projects in city centres.

In 2014, together with the Eduardo Torroja Construction Science Institute, we began tests to determine resistance to root penetration, in accordance with the EN-13948 standard, for the DESMOPOL polyurethane membrane (system listed under ETE/ETA 10/0121).



If you need more information or would like to consult any of these certificates, please contact our technical team at the following E-mail address: dpont@tecnopol.es

CASE STUDIES

BANCO DE COSTA RICA PARKING LOT, GLOBAL PARK FREE ZONE



PROJECT: Banco de Costa Rica Párking Lot, Global Park Free Zone

SURFACE: 2.500 m²

DESCRIPTION: Waterproofing and sealing of exterior concrete slabs for traffic deck

SYSTEM EMPLOYED:

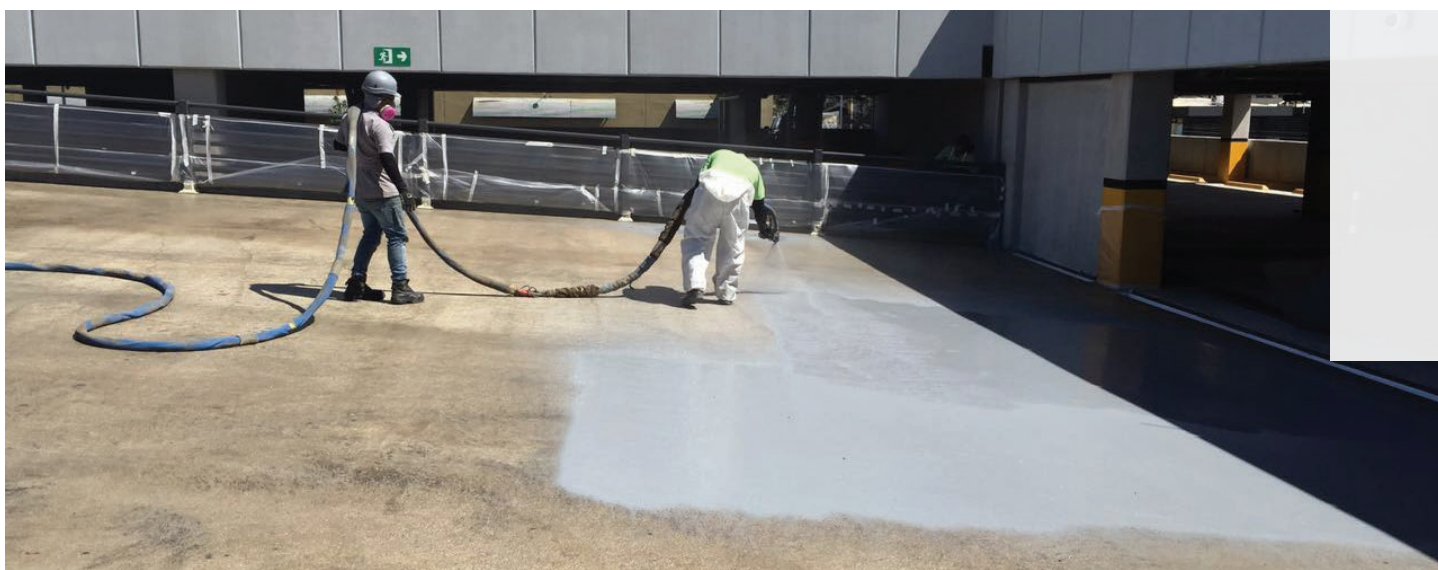
- PRIMER PU-1050 (330 g / m²)
- TECNOCOAT P-2049 (2 mm)
- TECNOTOP 2C (2 couches de 140 g / m² chacun)

APPLICATION COMPANY:
Grupo Sur www.gruposur.com



HEAD OF SPECIAL FLOOR & ROOFING
SECTOR: Architect Luís Enrique Soto Soto

DIRECTOR OF CONSTRUCTION PRODUCTS
DIVISION: William Viquez Calderón





TECNOFOAM WEARS GREEN

New green initiatives are discovered in our industry every day. There is an increasing demand for ecological building techniques and the field of construction is constantly searching for new green solutions in order to develop a more sustainable way of building.

TECNOFOAM's line of foams provides one of these "ECO" solutions, which we will explain in this article. In order to reinforce its added value, starting in January 2017, water-based TECNOFOAM foams will be produced in the color green.

There are various ECO advantages of our water-based foams for thermal insulation:

- The blowing agent is water; the foam's composition does not contain any gases that act as a blowing agent.
- In accordance with European regulations for gas emissions, TECNOFOAM water-based foams do not emit any toxic gases during application or over the course of their useful life (once they have been applied).
- Gases are not required to be captured for recycling and/or destruction, meaning that their removal does not require any sort of permit or special procedure.
- These systems are 100% recyclable, using mechanical means that are environmentally friendly.
- They do not contain any substances that could damage the ozone layer and therefore do not contribute to the greenhouse effect (NO HFCs, HCFCs, VOCs, etc.).

This system has a continuous positive impact on the environment, since its "ECO" action is backed by the great energy savings it provides for construction that uses TECNOFOAM for thermal insulation.

Furthermore, these foams have invariable thermal conductivity, remaining constant throughout the product's useful life, and thereby optimizing the system's thermal insulation capacity.





Being TECNOPOL customer guarantees maximum added value with each product

EXCLUSIVE TECHNICAL ADVICE SERVICE

As a TECNOPOL customer you can enjoy the assistance of a personal technical advisor who will help to ensure that your project is a guaranteed success. We will provide all the necessary information, technical specifications and certificates for the products best suited to your specific needs and at any time before, during and after the work is performed.

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www.wedevelopvalue.com

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