

# TECNO MAGAZINE

by TECNOPOL



## TECNOFLOOR, high performance epoxy floors

Versatile, hard wearing and economical  
with a high quality finish and easy application

### Case Study

Waterproofing solution used in the Spodek Sports Arena in Poland.

TECNOCOAT P-2049 EL chosen as the sealing coat used for this major refurbishment project.

### Company Strategy

TECNOPOL renews all ETA certificates according to actual EU regulations.

New legislation came into force in October 2013.

### Tecnoassistance

How to avoid the appearance of unwanted pin-holes.

The correct techniques to save you application problems.

**WE WILL PROVIDE ALL THE  
TECHNOLOGICAL KNOW-HOW TO  
ENSURE YOUR PROJECTS ARE  
FULLY COMPLETED ACCORDING  
TO HIGHEST STANDARDS.**



# SUMMARY

- 4 **Publication**  
The new **TECNOMAGAZINE**
  
- 5 **Present**  
We are pleased to present our new range of  
TECNOFLOOR continuous flooring
  
- 8 **Products**  
TECNOBAND 100, to ensure maximum  
protection on joins and borders
  
- 8 **Tecnoassistance**  
How to avoid the appearance of pinholes when  
applying pure polyurea
  
- 9 **Case Study**  
TECNOCOAT P-2049 EL, the waterproofing  
solution used in the Spodek Sports Arena in  
Poland
  
- 10 **Company Strategy**  
TECNOPOL renews all ETA certificates
  
- 10 **Figures**  
Thermal insulation in buildings. How far does it  
actually affect our fuel bills?
  
- 11 **Tecnología**  
The new E-10 HP Graco Reactor system
  
- 11 **Web**  
ISSUU, the youtube for publications where you  
can easily access our catalogues
  
- 11 **Green update**  
Photocatalysis, a new innovation in  
construction techniques designed to eliminate  
pollution

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Y PAVIMENTOS EPOXI



**TECNOPOL**

# publication

**Don't you ever feel that time flies by much faster than it did when you were a child?**

The new **TECNOMAGAZINE**  
A new technical magazine packed  
with information on moisture  
control, insulation and industrial  
flooring

As children we always live for the moment and enjoy life to the full with no thought for the consequences and without stopping to remember what happened yesterday or worrying about tomorrow.

As the years go by we lose this spontaneity and sense of adventure. We are too caught up with torturing ourselves about the past or being preoccupied with the future to really live in the present and appreciate today.

Studies have shown that the best way to feel satisfaction and contentment is to clear the mind and fully focus on what you are doing at any given moment with no thought for anything else.

In our sector rushing the job can easily result in disaster. Poor technique, inadequate products or bad planning will generally lead either to the work having to be done again or the potential loss of a client.

As a little light relief from the stressful daily routine, we have just released the first issue of **TECNOMAGAZINE**, a technical magazine aimed at professionals working in architecture, industry and construction. The publication will include full information on our company profile and products and services as well as informed articles on waterproofing and insulation issues in general.

The magazine will be issued quarterly and distribution will be mainly digital, via E-mail and thorough a range of social networks (Facebook, twitter, google+, Issuu, Scribd,).

We hope it will be of professional interest and assist you in your business.

**Jordi Catalán**  
CEO of Tecnopol



**TECNOFLOOR**  
EPOXY FLOORS

## We are pleased to present our new range of **TECNOFLOOR** continuous flooring The latest in epoxy flooring

**TECNOPOL SISTEMAS** have just released a new range of epoxy flooring under the **TECNOFLOOR** label. These products have been specially designed to offer our clients a hard wearing and economical solution which is easy to apply and provides a high quality finish for all types of project.

The **TECNOFLOOR** range includes 3 different products, **TECNOFLOOR Tw-3040**, **TECNOFLOOR T-3020** and **TECNOFLOOR T-3020 AS**. These floor coverings have been scientifically developed to produce a unique new range designed to meet the most demanding requirements and technical standards.

**TECNOFLOOR Tw-3040** is a fluid, pigmented, water-based epoxy coating with optimal chemical and mechanical resistance properties. It has been especially designed for application in garages, parking lots, and vehicle transit areas, over flooring surfaces subject to the strictest decontamination and cleaning standards, and in the chemical and food processing industries.

Tw-3040 can be applied as paint, as a multi-coat system or a multi-coat plus system. The Tecnofloor catalogue provides full instructions on each type of application.

**TECNOFLOOR Tw-3040** offers highly competitive price benefits compared with similar products on the market.



**TECNOFLOOR T-3020** is a pigmented, fluid, 100% solids of high chemical and mechanical resistance epoxy coating for application over concrete flooring surfaces. It has been especially designed for application as protective coating over concrete surfaces and in heavy-duty industrial flooring finishings.

T-3020 can be applied as paint, as a multi-coat, a multi-coat plus or self-levelling system.

**TECNOFLOOR T-3020 AS** is a product that has been meticulously developed to create a continuous covering virtually free from electrical charge, making it ideal for all applications where this a vital requisite. It is especially recommended for use in electronic laboratories, clean room environments, surgeries, offices with highly sensitive equipment, production

lines, etc. ... it can be applied as paint or a self-levelling coating.

The TECNOFLOOR range offers high performance epoxy flooring which is versatile, hard wearing and economical providing a high quality finish with easy application.

## UNE-EN 1504.2 certification

### The latest in epoxy flooring

**TECNOFLOOR** floor coverings come with the **UNE-En 1504.2** guarantee certificate. This industry standard is listed as follows: "Products and systems for the protection and repair of cement structures; definitions, requirements, quality controls and conformity assessment. Part 2: Concrete surface protection systems."

Please consult our website [www.tecnopol.es](http://www.tecnopol.es), for full details on the technical specifications of all **TECNOFLOOR** range products.





## TECNOBAND 100

# ENSURE MAXIMUM PROTECTION ON JOINS AND BORDERS

Use TECNOBAND 100 to reinforce moisture control and resistance of TECNOCOAT and DESMOPOL coatings at all the crucial points.

The use of **TECNOBAND 100** is highly recommended with **DESMOPOL** mono-component polyurethane coatings to reinforce individual points such as joins with vertical or inclined surfaces.

Use is also advisable on non-structural expansion joints, areas of contact with rainfall and other materials. The initial placement

of a strip of this self adhesive geo-textile butyl-acetate tape will reinforce the covering against any potential movement in such locations. Adaptable to all geometric shapes, it is easily combined with all moisture control coatings.

When employing **TECNOCOAT P-2049** (more resistant and with excellent physical-mechanic properties) the

use of **TECNOBAND 100** should only be necessary in the case of applications on metal supports with non-structural joins and weakened areas.

In short, **TECNOBAND 100** is an excellent additional product worth bearing in mind at all times to maximize the effectiveness of moisture control coatings.

## TECNOASSISTANCE

# HOW TO AVOID THE APPEARANCE OF PINHOLES WHEN APPLYING PURE POLYUREA

PINHOLES are generally caused by air escaping from the concrete after the coating is applied.

**TECNOCOAT P-2049** 100% pure polyurea coating has been formulated to prevent the occurrence of this undesirable phenomenon. Even so, pinholes may still occur under certain conditions. Let's see how to best avoid them and ensure a perfect application:

1. First we should ensure that the concrete has been allowed to fully set (allow 28 days) and then check that there is no surface moisture of any type before application.
2. We should then correctly prepare the area for application using the appropriate mechanical tools. This will typically involve sanding, blasting or milling of the concrete to ensure as smooth as possible surface.
3. All cracks and holes should be covered with EP-1020 PRIMER mixed with calcium carbonate (CaCO<sub>3</sub>) to produce a hard, quick drying and unshrinkable filling. Depending on the size of the area to be filled we may

also use DESMOSEAL MASILLA PU, a polyurethane sealing compound available in soft cartridges.

4. Finally we should apply two coats of Pu-1050 PRIMER, creating a surface film which will not only improve the adherence of the final coating, but also ensure that all pores in the concrete are fully covered to prevent the escape of any trapped air. In some cases it may be advisable to apply the primer combined with clean, dry silica sand.



*Pinholes in a liquid coating*



# TECNOCOAT P-2049 EL

## THE WATERPROOFING SOLUTION USED IN THE **SPODEK** SPORTS ARENA IN POLAND

TECNOCOAT P-2049 EL pure stretchable polyurea coating is ideal for metallic structures.



The Spodek Arena is a multi-purpose stadium in the city of Katowice in Poland which first opened in 1971.

Apart from the main covered dome, the arena complex also features a gymnasium, ice rink, hotel and three large car parks. It is the largest roofed venue of its type in Poland. The Spodek is used extensively for sporting and cultural events as well as business trade fairs and exhibitions.

Over the course of 2013 the arena underwent a major refurbishment including extensive waterproofing treatment using TECNOCOAT P-2049 EL 100% PURE STRETCHABLE POLYUREA coating.

### Procedure employed:

1. Preparation of all surfaces for treatment: structural joins, overlapping elements, etc.
2. Full cleaning of all soil, dust and other residue remaining from previous building and repair work.
3. Application of **PRIMER EPw-1070** to all surfaces.
4. Application of **TECNOCOAT P-2049 EL** pure stretchable polyurea coating, specially designed for application on metallic surfaces.
5. Subsequent coating of all surfaces with **TECNOTOP 2C** tinted aliphatic varnish. This treatment prevents any discolouration of the surface resulting from UV rays and will increase the longevity of the finish.

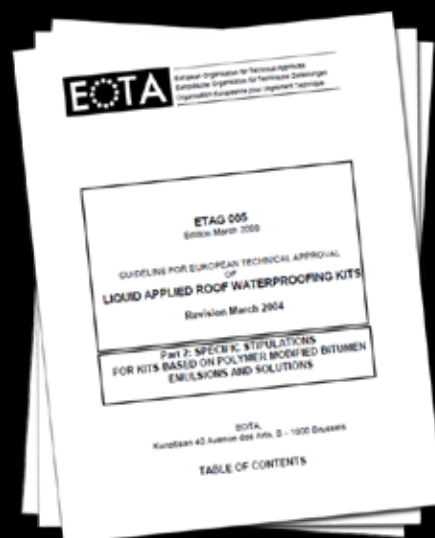


# TECNOPOL RENEWS ALL ETA CERTIFICATES

On the 31st October 2013 the new regulation (EU) No. 1062/2013 came into force defining the ETA (European Technical Approval) standards governing all products and materials used in the construction industry.

Both EOTA (the European Organization for Technical Approvals) as well as the individual Technical Approval Organizations throughout the member states have adapted their testing procedures and formats in line with the new regulations. In Spain the various certificates and documents have also been reclassified accordingly (from DITE to ETE).

At TECNOPOL, via the Eduardo Torroja Institute of Construction Science, we have updated our TECNOCOAT P-2049 pure polyurea coating to ensure that it conforms to all the technical specifications required in terms of efficient waterproofing suitable for construction projects and public tenders throughout the European Union.



## FIGURES

### THERMAL INSULATION IN BUILDINGS. HOW FAR DOES IT ACTUALLY AFFECT OUR FUEL BILLS?

Studies have recently been carried out to analyze the real affect of thermal insulation on the energy consumption of specific buildings. For the purpose of the research, a series of fixed data was assembled based on characteristics such as typology, number of dwellings, sunlight and shade, gaps between walls, air circulation etc. These figures were then matched against a variable figure, namely the level of insulation, and listed as follows:

1. Prior to NBE CT79, buildings earlier than 1980.
2. In accordance with NBE CT79, buildings completed between 1980 & 2008.
3. In accordance with CTE DB HE1, buildings after 2013.
4. Figures achieved thanks to the extra level of insulation employed in so-called passive housing.

On the basis of these conditions the annual energy consumption of a 90m2 dwelling was calculated varying only the level of insulation of the external covering. A

natural gas heating system, with a 0.85 boiler efficiency rating was used with gas priced at € 0.05 per kWh.

The following table shows the results obtained:

	kWh/year	€/year
Prior to NBE CT79	18.404	920,2
NBE CT79	12.367	618,4
CTE DB HE1	6.808	340,4
Passive housing	2.943	147,2

As a result we can see that a 90m<sup>2</sup> apartment could save up to 600% depending on the level of insulation employed. This saving could be even greater in the case of isolated single family dwellings, under cover, with unfavourable locations or obstacles in the way of direct sunlight.

Source: <http://impulsobelenus.blogspot.com.es>

## TECHNOLOGY

# THE NEW E-10 HP GRACO REACTOR SYSTEM

The high pressure E-10 HP Reactor is a reasonably priced machine that could help your business to grow. It provides the high pressure, performance and precision required for fast and easy application of TECNOCOAT polyurea coatings.

The machine is lightweight and portable and runs off a standard residential power supply - meaning there is no need to invest in an external generator.

The HP version has the added advantage over the standard model in that it includes a new heating and insulation system on the tanks allowing fast heating of the material. The machine will be ready for operation and spraying in 20 minutes compared with the hour warm up time required with the standard E-10 reactor.



## WEB

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Issuu.com is a website designed for sharing publications in a digital format simulating the manner in which one would circulate a printed publication.

It operates in a similar way to youtube, but instead of videos you can access documents. The format allows comfortable reading online and you

can also download publications for when you don't have access to internet connection.

All Tecnopol catalogues are available on Issuu.com, just go onto the page and type "tecnopol" in the search box.



## GREEN UPDATE

# PHOTOCATALYSIS, A NEW INNOVATION IN CONSTRUCTION TECHNIQUES DESIGNED TO ELIMINATE POLLUTION.

It hardly needs to be stressed today that a reduction in gas emissions and pollution is a priority for all of us; however meeting the objectives set by regulatory bodies can sometimes still be a complex task.

Nevertheless the construction industry can now take active steps to eliminate pollution and toxic emissions prevalent in large cities. New technology has helped to develop materials that will chemically react with contaminant gases to convert them into much less harmful substances. This process is known as photocatalysis.

It is now possible to produce all types of construction elements using photocatalytic materials. The

difference between these and traditional materials lies in the chemical process used in production which introduces properties which react with light, resulting in an oxidation with the contaminant gases normally found in the atmosphere ( NOx, SOx, VOCs). A building which is 100% photocatalytic would be capable of eliminating up to 89% of the nitrogen oxide (NOx) particles in its immediate area.

As yet these solutions have not been introduced on a wide scale and there are only isolated examples; however the potential is now there to improve and revolutionize the design of our cities in the future.



TECNOPOL<sup>®</sup>

[www.tecnopol.es](http://www.tecnopol.es)

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