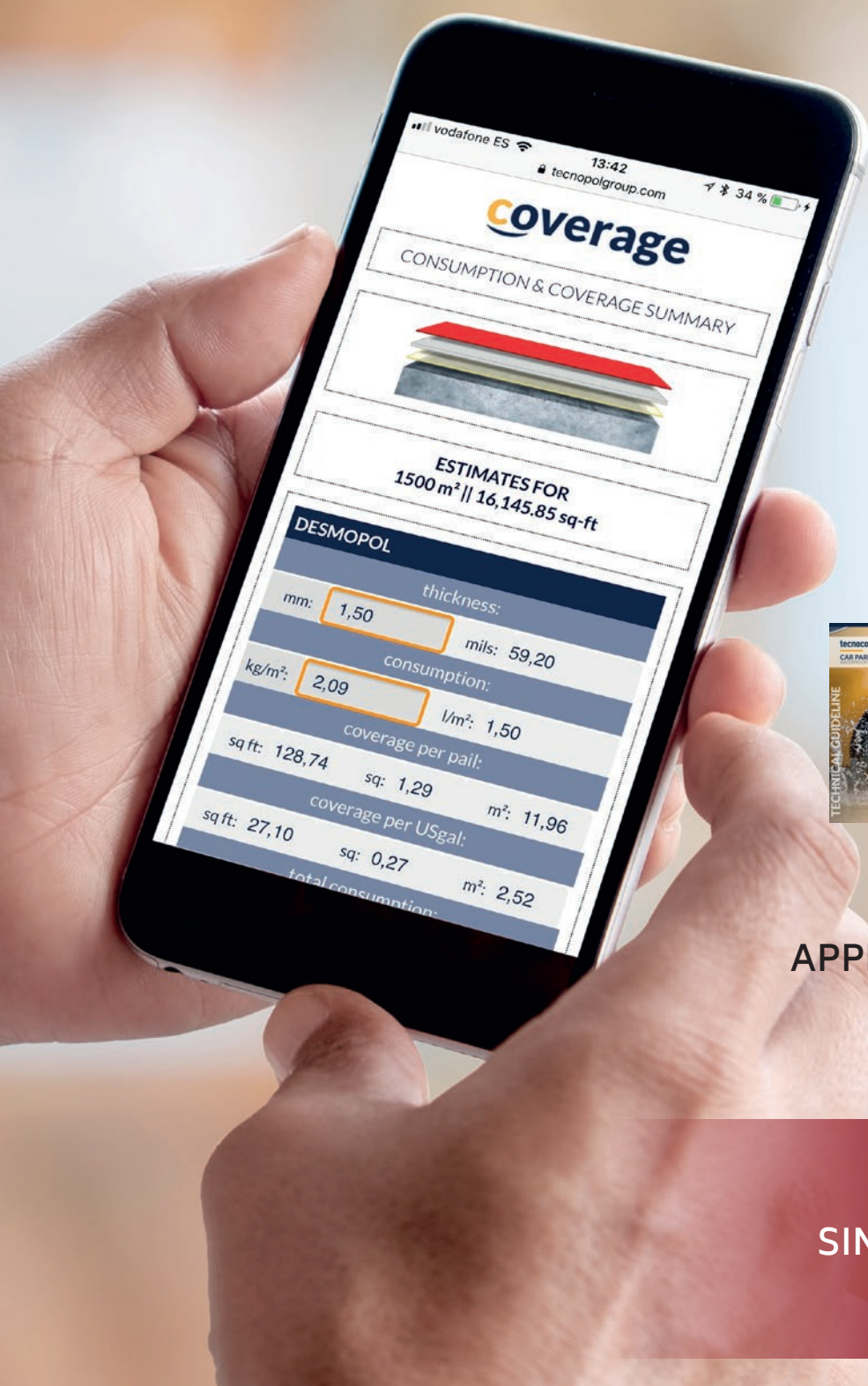


TECNO MAGAZINE

by TECNOPOL



COVERAGE
THE NEW
TECNOPOL
WEBSITE APP TO
CALCULATE THE
EXACT QUANTITIES
REQUIRED
FOR OPTIMUM
PERFORMANCE



TECHNICAL GUIDES
THE MEMBRANES
APPLICATION STEP BY STEP

TECNOTOP 1C
SINGLE-COMPONENT
ALIPHATIC RESIN

tecnocoat

INSTANT SETTING COATINGS



as **big** your projects



SUMMARY

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WE ARE PLEASED TO PRESENT
OUR TECHNICAL GUIDES
 WE HAVE PRODUCED NEW TECHNICAL
 GUIDES FOR THE APPLICATION OF OUR
 TECNOCOAT AND DESMOPOL MEMBRANES.



We have recently published new technical guides for the application of our membranes, which include information on the methods to follow based on the end use of the products.

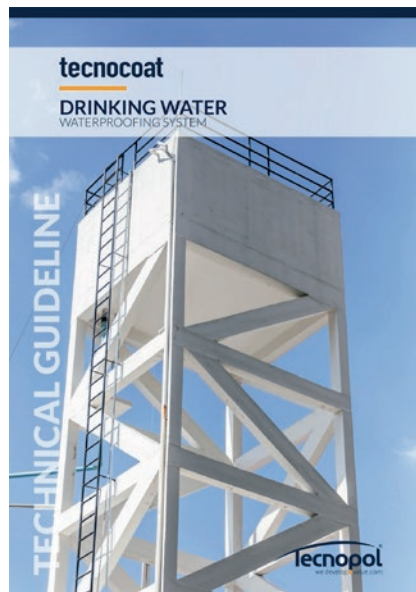
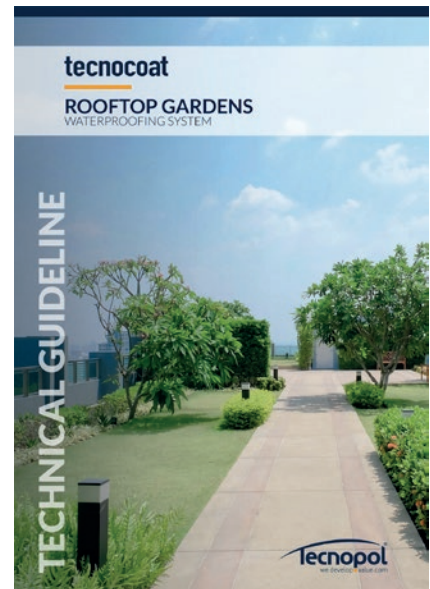
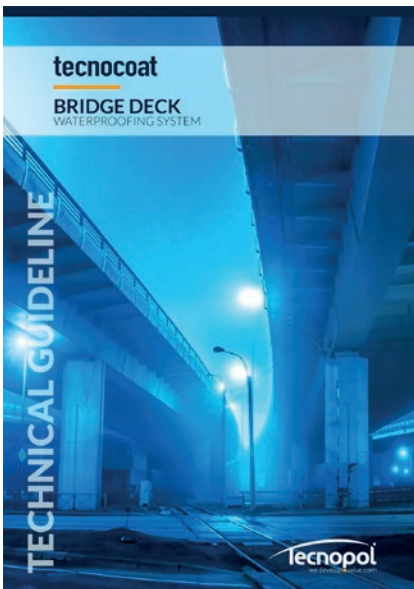
These guides have been produced in order to pass on to our clients the experience and know-how acquired over the course of dozens of testing procedures. We are aware that project success will ultimately depend not only on the excellence of the product itself, but also to a large degree on the correct execution of the application process.

The aspects covered in the guides will include explanations on the correct preparation of surfaces,

the use of primer coats, waterproofing and protection. There will also be advice on recommended systems, quantities required and application methods.

Proper instruction and training are fundamental principles of ours, which are especially important within a relatively new sector such as the use of liquid membranes.

These guides are designed to complement the personal instruction which we offer at our installations for both companies and freelancers who wish to use our products on their projects.



We currently offer the following specific guides which can all be downloaded from our website.

- Roofing
- Garden roofs and terraces
- Car parks
- Bridge decks
- Swimming pools and water parks
- Contact with drinking water
- Fibre cement

Our technical and marketing departments are currently working on new guides which will shortly be available on our website.



tecnotop
1C



RANGE

TECNOTOP 1C

A SINGLE-COMPONENT ALIPHATIC VARNISH DESIGNED FOR NON-TRAFFIC AREAS.

TECNOTOP 1C is a single component aliphatic resin, tinted and with a gloss finish. We have formulated this new product for the coating, decoration and protection of floorings, as well as the protection of the TECNOCOAT and DESMOPOL aromatic waterproofing membranes.

One of the great advantages of this product is its quick initial drying to the touch, just 5 minutes, with the product ready for use for pedestrian traffic in 2-3 hours.

TECNOTOP 1C is recommended for the protection of surfaces with light traffic or those used solely for maintenance purposes. For areas with more intensive use we would recommend its counterpart product TECNOTOP 2C. In either event our technical department is always available to offer guidance on the most suitable product depending on the intended use, surface and climate conditions.

Once applied, the product forms a strong, flexible, continuous and completely adhesive film with mechanical properties that make it resistant to bad weather, extreme temperatures and UV rays.

Consumption of TECNOTOP 1C will vary according to the number of coats, the type of surface and the intended use. If applied in several coats, the consumption will be approximately 70 - 100 g/m²/coat.

The base colours available in any quantity are white, grey (RAL 7042) and brick red (Ral 8004). Tecnotop 1C is also available for a minimum order of 300kg, in any colour of the RAL range.

The product is supplied in metal containers of 5 and 20 kg.

The main properties of the product are listed below:

PROPERTIES	VALUES
Solid content ISO 1768	±63%
Adherence to concrete at 23°C	>1,3 MPa (N/mm ²)
Drying to touch at 23 °C	±5 minutes
Repainting time at 23 °C and 60% HR	5 min. ~ 48 hours
Pedestrian traffic at 23 °C	After 2-3 hours
Methods of application	Brush, roller or "airless" equipment



WE HAVE BEGUN A NEW DISTRIBUTION NETWORK IN ARGENTINA WITH THE PARTICIPATION OF FANA QUÍMICA S.A.



We are very pleased to announce our arrival in Argentina thanks to Fana Química S.A., a company founded in 1956 which is now firmly established as a trusted and competitive market leader.

Fana Química S.A. is a leading company with proven experience in the manufacture of adhesives for shoemaking, timber, hardware and other industries. They offer a wide selection of innovative products including contact adhesives, and vinyl and polyurethane materials. The organization believes that Tecnopol will be a valuable addition to their range aimed at the construction sector.

We have great expectations for the future of this new distribution agreement. We are confident that Fana Química, with its vision, years of experience and extensive commercial network, will be the perfect distributor for Tecnopol in Argentina.

RANGE

TECNOFLOOR T-3020

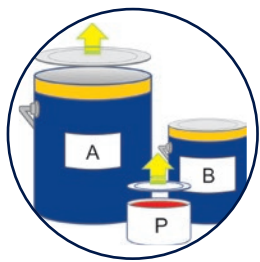
NOW AVAILABLE IN ANY COLOUR STARTING WITH A SINGLE 25KG KIT.

The TECNOFLOOR T-3020 epoxy and 100% solid covering is available, in any quantity, in the base colours green, grey and red.

If any other colour from the RAL spectrum is required (currently more than 200 available) a minimum order of 300kg will be necessary; this is the minimum quantity we can manufacture to order, and will take approximately 72 hours to produce from receipt of the order.

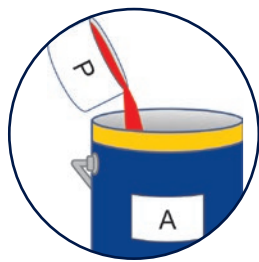
Thanks to a new manufacturing process developed by our R+D department, TECNOFLOOR T-3020 is now available in any colour and quantity. For this purpose a new format in a neutral tint has been formulated to which the exact quantity of pigment will be added to produce the desired tone.

The correct procedure for the preparation of the product is as follows:



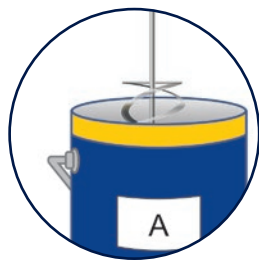
1

Open the pigment and component A containers



2

Pour the pigment into component A



3

Stir at a low speed until a homogenous mixture is obtained.



4

Open the component B container and add to the mixture.



5

Stir again at a low speed to obtain a uniform product mix.





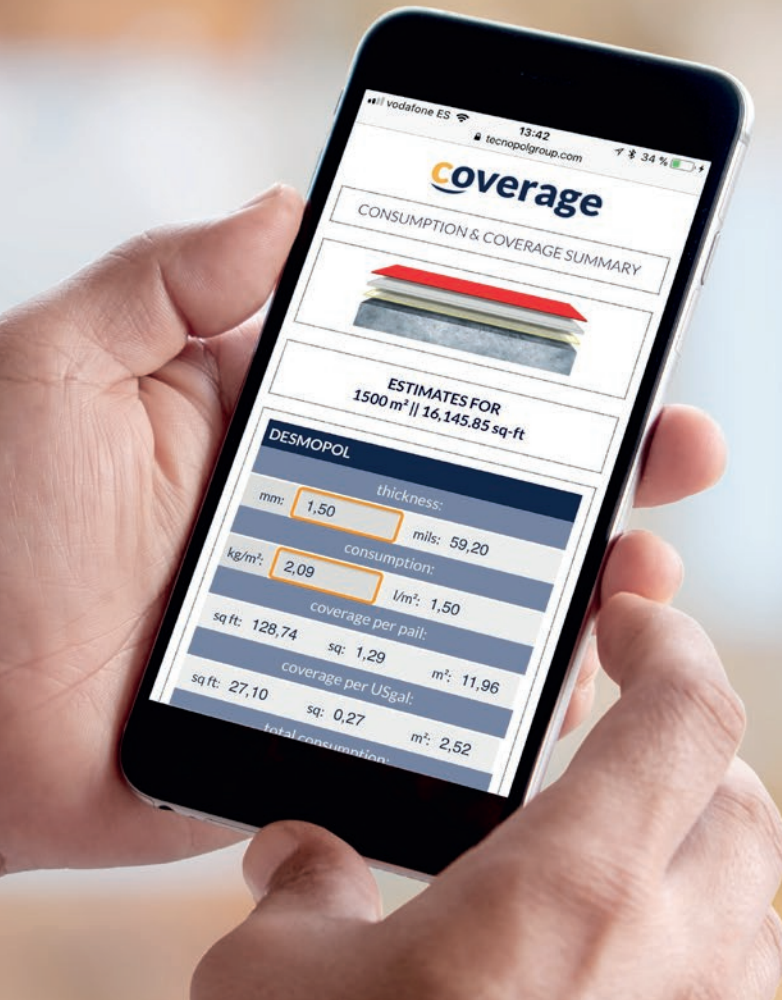
A GOOD END RESULT STARTS WITH A GOOD PRIMER

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.

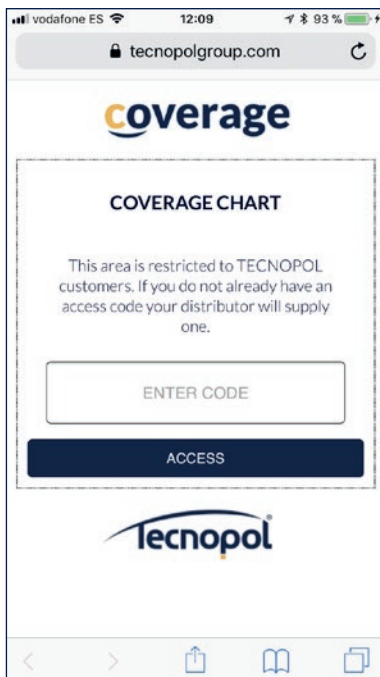




TECHNOLOGY

coverage

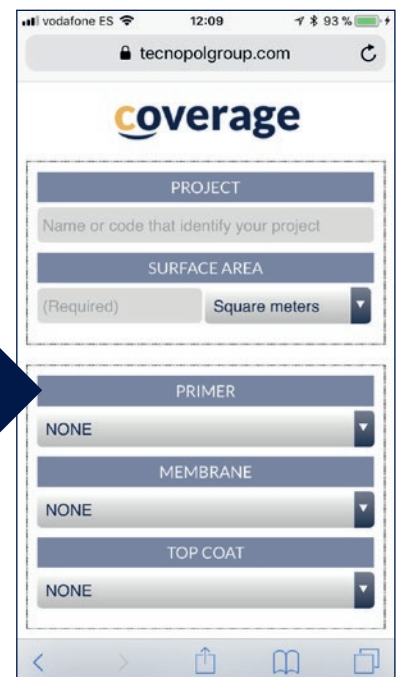
THE NEW
TECNOPOL
WEBSITE APP
WILL HELP TO
CALCULATE THE
EXACT QUANTITIES
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PERFORMANCE



We are delighted to present COVERAGE, a new website application developed to provide accurate calculations for our most commonly used waterproofing systems.

This app is specifically designed to explain the coating thickness, quantities and materials required for each job.

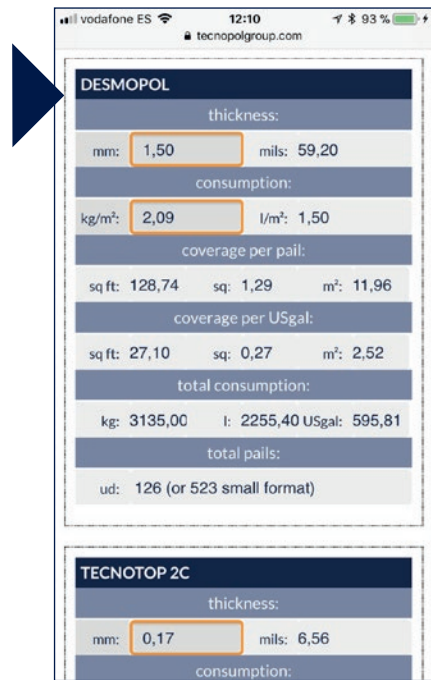
It is very simple to use, simply enter the name of your project, the square metres involved and the product to be used on each system coat. The app will make the relevant calculations in a matter of seconds and show the results on screen.



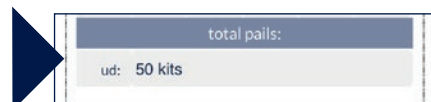
It should be noted that the calculations are based on our use recommendations, and for normal or ideal climate and surface conditions. On the results screen the app allows additional adjustments to thickness and quantities based on particular project requirements. As soon as the parameters are modified the results will be instantly recalculated.

coverage per pail:		
sq ft: 322,92	sq: 3,23	m ² : 30,00
coverage per USgal:		
sq ft: 244,48	sq: 2,44	m ² : 22,71
total consumption:		
kg: 300,00	l: 250,00	USgal: 66,04

In addition the app provides conversion between metric and imperial measurements - an essential tool for working in countries where the different systems are commonly used.



Other useful information includes a calculation of the exact number of product containers required for the project.



The results can be easily printed out or sent by E-mail or other digital formats as required, with a function for downloading a PDF document at the touch of a button.



Available at
<http://tecnopolgroup.com/coverage>



PRACTICAL EPOXY, ACRYLIC, AROMATIC, WATER-BASED, SOLVENT-BASED, 100% SOLIDS , ... DO YOU KNOW ITS MEANING?

ACCORDING TO THEIR FUNCTIONAL GROUP

EPOXI: An epoxy resin or paint is a thermostable polymer which hardens when mixed with a catalyst agent or "hardener". The most common epoxy resins are the product of a reaction between epichlorohydrin and bisphenol A. Epoxy paints are more resistant than other types of paint.

These products were first manufactured and marketed in the USA in 1927.

ACRYLIC: The term acrylic is used in chemistry to define material obtained by the polymerization of compound known as acrylic acid. In acrylic paints the pigments are dispersed in an emulsion produced with an acrylic type polymer. They become water resistant once dry, which occurs very rapidly, one of their main advantages.

Acrylic paint dates from the middle of the 20th century and was first developed simultaneously in Germany and the USA.

POLYURETHANE: One of the main elements in polyurethane coatings is the isocyanate functional group (-NCO). Polyurethane products do not generally crack or lose their flexibility once they solidify, and are also waterproof.

Otto Bayer produced the first polyurethane patent in 1937 and industrial production began in 1940.



ACCORDING TO THEIR CHEMICAL BASE

AROMATIC: These are derived from benzene (toluene, xylene, etc.) and are given this name as many have an intense and generally agreeable smell. In organic chemistry, the aromaticity of the hydrocarbons translates into more stable molecules due to the fact that the electrons can circulate from one link to another via the aromatic rings.

In the sphere of waterproof membranes such as polyurea or polyurethane, the aromatic nature translates into a more economical product while maintaining maximum quality and excellent properties. They do, however, tend to discolour when exposed to UV radiation, making extra protection normally recommended.



ALIPHATIC: The term aliphatic hydrocarbon is used for an organic compound formed from hydrogen and carbon with an open chain molecular structure lacking in aromaticity. We are not talking of smell, but rather the chemical property related to the behaviour of electrons with double links.

Aliphatic hydrocarbons are employed for a range of purposes, from fuels to solvents. They are also used as paints and coatings which are resistant to UV radiation.



According to their chemical base, DESMOPOL polyurethane and TECNOCOAT polyurea membranes are considered aromatic products.

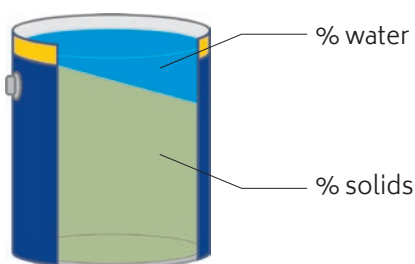


TECNOTOP range of topcoats are within the group of aliphatics

ACCORDING TO THEIR SOLVENT BASE

WATER BASED: As the name indicates water based products do not contain solvents and are dissolved in water, making them an ecologically sound product as they contain few volatile compounds.

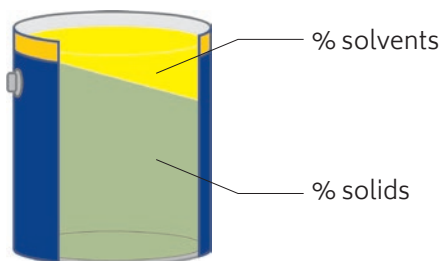
In terms of application and maintenance, water based products are easy to clean (just using water) making application and subsequent care much more comfortable. In the same way, unless applied using a spray gun, they do not need to be diluted and are very quick drying. Another advantage is that they do not give off disagreeable odours during use.



PROS	CONS
Ease of application using a spray.	Less gloss and durability.
More economical price.	Less hardwearing.
Lower cost than solvent based products.	Less sealing power.
No intense or disagreeable odours.	Less intense colours.
No volatile components.	
Easy to clean.	

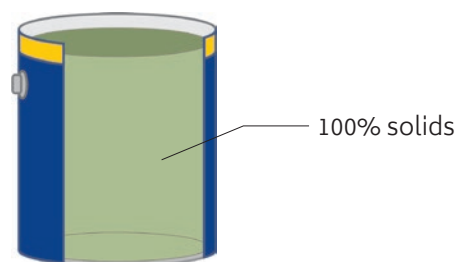
SOLVENT BASED: These types of paints use a solvent base, generally benzene, toluene, xylene or ethylene. Solvent based paints and finishes are generally longer lasting and have greater resistance to impacts, abrasion and stains. In the case of decorative applications it is important to highlight that these types of finish can

produce more intense and long lasting colours.



PROS	CONS
High sealing power	Contains volatile compounds
Intense colours	Intense odour during application
Greater durability	Incompatible with water, surface needs to be perfectly dry before application.
Good resistance to impact, abrasion and stains.	

100% SOLID: 100% solid paints or coverings are generally very high quality, resistant and durable products. 100% solid products do not contain solvents, and therefore do not emit VOCs and are more environmentally friendly. 100% solid products normally have a greater coverage capacity, thus requiring less volume of product for a specific project.



PROS	CONS
Strong resistance and durability	High cost
Solvent free	
Do not emit VOCs	
No disagreeable odours	
High coverage power	



CERTIFICATES

TECNOCOAT P-2049 OBTAINS THE ETA SUITABILITY CERTIFICATE UNDER GUIDE 033 (BRIDGE DECKS).

Water infiltration through road surfaces can seriously affect concrete bridge decks, creating damp, calcium carbonate deposits and even the appearance of rust leading to cracks and internal concrete breakages and disintegration. .

The only valid option to avoid this damage and protect the structure of the boards is to provide effective waterproofing.

The materials used for the waterproofing of bridge decks need to comply with the demands of impermeability, elasticity and durability, as well as having suitable and stable mechanical properties. Ideally they should also be physically and chemically compatible with other materials and be relatively easy to apply.

The TECNOCOAT P-2049 polyurea system has recently passed all the tests conducted by the Eduardo Torroja Institute of Construction Science in accordance with the European Technical Assessment of waterproofing systems for bridge decks applied in liquid form according to guide 033 (ETAG 033), which certifies that it complies with the essential requirements in terms of resistance, mechanical stability, hygiene, health, the environment and safety of use, in conformity with European regulation 305/11.



TECNOCOAT P-2049 OBTAINS THE SUITABILITY CERTIFICATE FOR USE IN CONTACT WITH DRINKING WATER IN ACCORDANCE WITH BS6920 ISSUED BY THE NSF LABORATORIES



The UK standard WRAS BS 6920 is defined as the "Suitability of non-metallic materials and products for use in contact with water intended for human consumption with regard to their effect on the quality of the water".

It is a requirement that all the non-metallic materials which come into contact with water destined for domestic use or the production of food products must comply with the specifications of BS 6920. The BS 6920 standard establishes a series of testing methods which assess the suitability of the materials in terms of the following:

- Transmission of odours and tastes
- Provoking changes in appearance (colour or turbidity)
- Promoting the growth of microbes
- Releasing substances toxic to human health

- Releasing toxic metals

TECNOCOAT P-2049 polyurea has recently passed all the tests required for the WRAS BS 6920 standard conducted by the NSF laboratories.

The NSF laboratories are internationally renowned for their experience and understanding of USA, European and Asian requirements, and produces reports in compliance with ISO/IEC 17025 signed by certified professional engineers.

As a result TECNOCOAT P-2049 has been fully certified as a finish suitable for contact with water destined for human consumption.

All the certificates and test results are available for our clients, in various languages, on our website or from our technical department.

SAVE TIME AND MONEY BY APPLYING DESMOPOL IN A SINGLE LAYER



SPECIAL ADDITIVE FOR DESMOPO POLYURETHANE MEMBRANE

- 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.

CASE STUDIES

WATERPROOFING OF SWIMMING POOLS WITH TECNOCOAT P-2049.



One of the most complex project types which can present the most problems is the waterproofing of swimming pools. TECNOCOAT P-2049 is one of the best options available for the construction and refurbishing of swimming pools, offering a range of significant advantages:

- Completely adhesive system: protects the support structure and eliminates all risk of leaks.
- Complete protection for the constructive element.
- Zero slope application.
- Direct application on the existing surface: reduces the generation of residue, which

contributes to improving the sustainability of the construction.

- Rapid work completion time, with corresponding cost savings.
- Reduced costs: does not require the application of mortar for protection.
- Multiple finishes (colours and textures), in accordance with anti-slip regulations and international standards and certificates.
- Resistance to chlorine and salt, from the installation maintenance and cleaning system.

Let us look at some success cases.



PRIVATE SWIMMING POOL
SPAIN



**SWIMMING POOL
RECREATIONAL AREA
SANTIAGO DE CHILE**



SPORTS COMPLEX SWIMMING POOL
SPAIN



ARAB BATHS
SPAIN



**INFINITY POOL
SPAIN**



**RESIDENTIAL SWIMMING POOL
SPAIN**



ECOLOGY

WHAT IS A VOC? WE PRODUCE ENVIRONMENTALLY RESPONSIBLE PRODUCTS WITH VOC LEVELS WELL BELOW PERMITTED LIMITS.

The initials VOC stand for volatile organic compounds, and refer to substances which contain chemical products easily converted into vapours or gases.

Volatile compounds can be natural (methane, isoprenoids emitted by vegetation etc.) or artificial (solvents). There are more than a thousand different compounds which may be considered VOCs, but the most common are the following: methane, ethane, propane, n-butane, n-pentane, benzene, toluene, xylene and ethylene.

In the formulation of paints and coverings it may be necessary to include solvents containing volatile elements. The percentage of these solvents in relation to the solids contained in the formula will determine the product's VOC. As a result a 100% solid product will have a 0 VOC, without volatile elements, and as a result will be more respectful of the environment and the health of those who come into contact with it; both manufacturers and end users.

Water-based products have a zero or very low VOC.

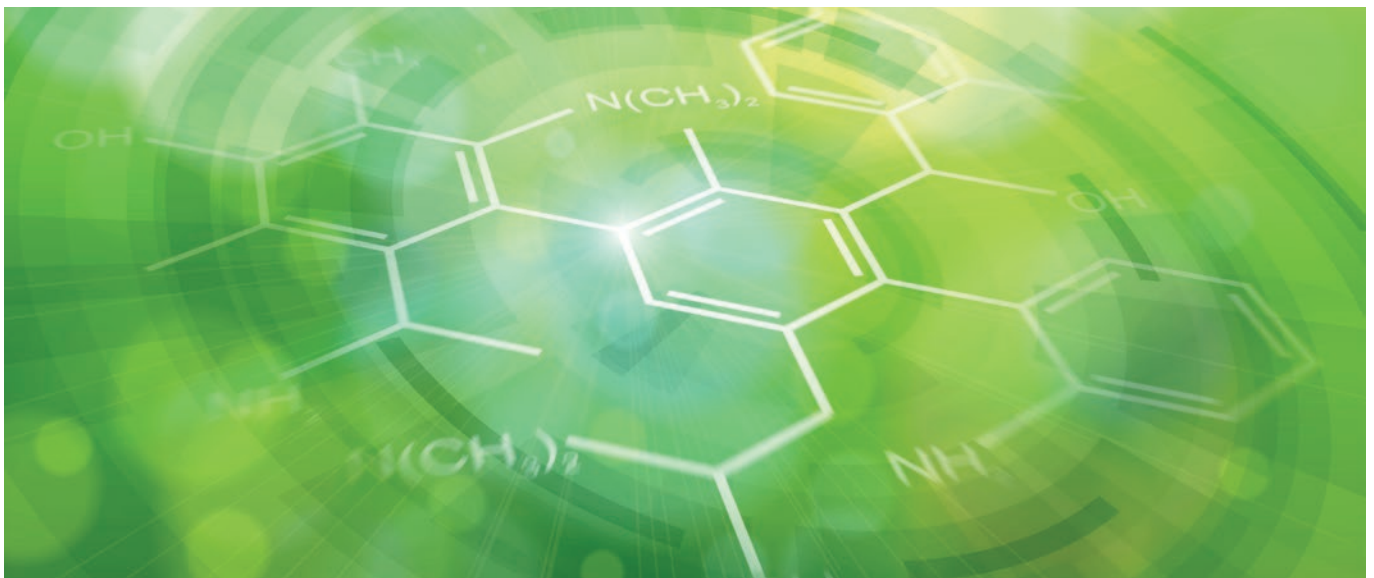


All Tecnopol products must conform to directive 2004/42/CE of the European Parliament and the Council, dated 21st April 2004, which restricts VOC emissions resulting from the use of solvents in specific paints and varnishes.

In the labeling of all TECNOPOL coatings, primers and varnishes the VOC index of the product is listed together with the corresponding category and the permitted limit.

Our company is firmly committed to environmental issues, and as such more than 60% of our coatings and primers contain no solvents (VOC 0) while the remainder have a VOC clearly below the permitted limit (in almost all cases below half).

We will continue to work in this manner – the only way we know how. All products still being developed will have a VOC as low as possible.





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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Tecnopol

www.wedevelopvalue.com

TECNO MAGAZINE

by TECNOPOL

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