



## STRETCHABLE MEMBRANE 100% PURE POLYUREA (>600%)

The 100% elongable pure polyurea **TECNOCOAT P-2049 EL** system was developed as a single coating suitable for waterproofing, protection and sealing in general. The pure polyurea **TECNOCOAT P-2049 EL** membrane is made up of two liquid components, isocyanates and amines.

## USES

For waterproofing and protection of:

- Metal roofs (zinc, couper, prepainted...).
- Construction element on civil works (bridges)
- Fibrer -cement roofs.

Performance	± 2 kg/m <sup>2</sup> (2 mm thick)
Tack time	± 25 seconds (20 °C)
Dilution	Do not dilute
Application Method	High pressure reactor equipment
Ratio	1:1
Hardness Shore A	> 75
Elongation	> 600%
Resistance to traction	± 13 MPa



## GENERAL FEATURES:

- **TECNOCOAT P-2049EL** is a very elasticity and hard-wearing product that, once applied, offers great stability and durability.
- Thanks to its versatility and its drying time of between 13 and 15 seconds **TECNOCOAT P-2049EL** adapts to any surface, making it the ideal product for application on uneven surfaces and in areas of any shape, whether curved or squared.
- Applying **TECNOCOAT P-2049EL** saves in seals and any other kind of joins, as the finish is uniform and makes up a single layer, providing a surface with optimum maintenance and cleaning properties.
- The elongable **TECNOCOAT P-2049EL** pure polyurea membrane system should be applied in dry conditions



avoiding the presence of humidity or coming from the surface to be coated or the substrate, whether at the time of application or subsequently (pressure from phreatic water level).

- In the event there is humidity in the substrate at the time of application, consult the technical specifications of our primers where the maximum humidity ranges are specified, or our Technical Application Manual for TECNOCOAT P-2049. (TAM)
- The **TECNOCOAT P-2049EL** system requires solar radiation protection (UV rays) to ensure it does not lose its properties, given that it is an aromatic membrane. The system incorporates a protective varnish, TECNOTOP 2C, for use in the absence of other physical protection elements.
- The reaction of **TECNOCOAT P-2049EL** upon application provides great stability in a seconds and it may be walked on and guarantees waterproofing in less than 6 hours. This polyurea reaches its optimum conditions after approximately 24 hours.
- The **TECNOCOAT P-2049EL** system's properties enable it to bond to any surface, such as cement, concrete, polyurethane, wood, metal, etc. Furthermore, due to its resistance it can be walked on and it will accept a rough finish to make it non-slip.

## COLORS:

REFERENCE	COLOR
P-2049.T1	DARK GREY
P-2049.T2	BLACK
P-2049.T3	GREY
P-2049.T4	RED

## YIELD:

Product yield is 2 kg/m<sup>2</sup> according the kind of application, or kind of surface (advice with MTA TECNOCOAT P-2049)

## PRESENTATION FORMATS

Metal drums of 225 kg each component

## EXPIRY

12 months at temperatures between 5° C and 25° C, provided it is stored in a dry place. Once the tin has been opened, the product must be used immediately.

## APPLICATION:

In general, the following aspects should be dealt with prior to spraying:

- Repair the surface (fill in depressions, eliminate unevenness, eliminate any old waterproofing, etc.).
- Clean the surface or substrate, removing any dust, dirt, grease or efflorescence.

The **TECNOCOAT P-2049EL** elongable and pure poliurea system can be applied to many different surfaces and the procedure will vary depending on its nature or state.



Below we set out some of the application for the most common surfaces; for other surfaces not described, please contact our technical department.

**Concrete substrate**

- Any depressions or voids should be repaired using a mix (ratio of 1:1.3) of our epoxy resin PRIMER EP-1020 mixed with silica sand.
- 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 laitance or release agents should be eliminated and an open pore surface achieved by grit blasting, milling or sanding.
- Next, clean and eliminate all contaminants from the elements, such as dust or particles from the previous processes.
- Apply the primer in the conditions and with the parameters indicated in the technical specifications for these products. In general, the dual component polyurethane PRIMER PU-1050 should be used.

**Metal substrate:**

- Metal surfaces should be prepared using sand-blasting, in order to improve the surface's mechanical fixation properties.
- Check the seals and overlaps and where necessary seal with MASTIC PU mastic or TECNOBAND 100 in combination.
- For rapid and efficient cleaning of the surface use a ketone based solvent, our DILUYENTE TEC-4U Thinner.
- Apply prior priming using a water-based epoxy type primer, our PRIMER EPw-1070, to improve surface levelling and bonding. Consult the technical specifications of this product.

**Ceramic substrate:**

- Ceramic surfaces should not have empty joints or loose elements or parts. These should be filled with MASTIC PU mastic, complemented with TECNOBAND 100 on the joints if necessary.
- For rapid and efficient cleaning of the surface use pressurised water and check that it evaporates completely. Also verify that all dust and other physical contaminants have been eliminated.
- Next apply the required primer; in these cases of non-porous surfaces use the water-based epoxy PRIMER EPw-1070

Always consult the waiting and drying times and application conditions for all products in the Specification Sheet for each product or in the technical manual for application of the TECNOCOAT P-2049 (TMA) system

**HANDLING AND TRANSPORT**

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 generation should be avoided or minimized. Incinerate under controlled conditions in accordance with local laws and national regulations.

Anyway, consult the safety data sheet of the product, are publicly available.

## COMPLEMENTARY PRODUCTS

The **TECNOCOAT P-2049EL** 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 in a ratio of 1:4, this is used to fill in depressions in concrete surfaces, rapidly providing a firm and fast drying even base.
- PRIMER EPw-1070: This primer is 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 specifications).
- TECNOTOP 2C-: Dual-component coloured aliphatic polyurethane varnish used to protect roofs and floors or ground against UV rays when there is no other protection.
- TECNOPLASTIC F: This plastic powder, once mixed with Tecnotop 2C, forms a rough surface, conforming even to norm UNE ENV 12633:2003 (floors slipperiness), to achieve Class 3 (>45 slip resistance), depending on dosage (consult our technical department).
- TECNOBAND 100: Cold bond deformable band made up of an upper layer of non-woven textile and lower layer of viscoelastic 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 PU: Polyurethane mastic for filling joints (use together with Tecnoband 100 when necessary).

## APPLICATION REQUIREMENTS (MACHINE GUN)

The temperatures and pressures for correct use of TECNOCOAT P-2049EL, are as follows:

- Heater temperature: 78 –80 °C
- Hose temperature 75 °C 80 °C
- Pressure: 2700 2900 psi (180 200 bar)

Anyway, these parameters for adjusting the projection equipment are approximate and may change depending on the weather conditions of the environment in the moment to apply, therefore, is responsibility of the applicator values in each case the option to choose.



## TECHNICAL DATA

PROPERTIES	RESULT	METHODE
Density at 23 °C	1.080 kg/m <sup>3</sup>	BS 4370 PART 1 METH 2
Elongation at break at 23 °C	>600%	UNE EN-ISO 527-1
Elongation at break at -40 °C	>350%	UNE EN-ISO 527-1
Tensile Strength at 23 °C	±13 MPa	
Tensile Strength at -40 °C	±23 MPa	
Hardness (Shore A) at 23 °C	>75	DIN 53.505
Climatic zone	S (severe)	
Support temperatures	-20 °C ~ 90 °C	
Constructive element slope	S1 ~ S4 (<5% ~ >30%) zero slope	
Fire reaction	Euroclass F	
Gel time	±13 ~ 25 seconds	
Cured time	±12 hours	
Solids (VOC zero)	100%	

## TECHNICAL DATA OF COMPONENTS:

PROPERTIES	COMPONENT A	COMPONENT B
Specific gravity (g/cm <sup>3</sup> )	1,11	1,05
Viscosity (cps) (S63, 30 r.p.m. at 25 °C) UNE-EN ISO 2555	1.100±50	700±50
Mix ratio – in weight	100	102
Mix ratio – in volum	100	100

