

TECHNICAL INFORMATION

AUTHOR TECNOPOL TECHNICAL SERVICE

REFERENCE TECNOCOAT P-2049 AS

VERSION v.3

REVISION DATE 22/11/2013

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TECNOCOAT P-2049 AS

COMMENTS

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DESCRIPTION:

The 100% pure poliurea **TECNOCOAT P-2049 AS** has been developed as a single coating and is suitable for waterproofing and sealing in general.

TECNOPOL SISTEMAS S.L. has developed an electric dissipative coating with the properties described below.

The pure polyurea **TECNOCOAT P-2049 AS** membrane is made up of two liquid components, isocyanates and amines, which are mixed together using spray equipment

ACCEPTED USES:

For waterproofing and protection of surfaces needing antistatic properties.:

GENERAL FEATURES:

- **TECNOCOAT P-2049 AS** is a very sturdy and hard-wearing product that, once applied, offers great stability and durability.
- Thanks to its versatility and its drying time of between 3 and 5 seconds **TECNOCOAT P-2049 AS** 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-2049 AS** 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.
- Contact with fuels, fertilizers, animal feces or urine or corrode not soften the poliurea **TECNOCOAT P-2049 AS**.
- With the implementation of the pure poliurea **TECNOCOAT P-2049 AS** is save together and any joint type and the finish is uniform and in one piece,

providing a surface very easy to clean

- The **TECNOCOAT P-2049 AS** 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**. (TMA)
- The **TECNOCOAT P-2049 AS** system requires solar radiation protection (UV rays) to ensure it does not lose its properties, given that it is an aromatic membrane. Therefore, our system application incorporates a protective varnish, **TECNOTOP 2C**, for use in the absence of other physical protection elements.
- The fast reaction of **TECNOCOAT P-2049 AS** upon application provides great stability in a few seconds and it may be walked on and guarantees waterproofing in less than 3 hours. This polyurea reaches its optimum conditions after approximately 24 hours.
- The **TECNOCOAT P-2049 AS** 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.
- The pure poliurea **TECNOCOAT P-2049 AS** pavement is not considered at sound, and even that is not intended for such use, has good acoustic properties



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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/m² according the kind of application, or kind of surface.

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-2049 AS** 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.

Ceramic substrate:

Ceramic surfaces should not have empty joints or loose elements or parts. These should be filled with DESMOSEAL MASILLA 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

Producing the levelling/scratch coat mortar:

1. Substrate preparation - see above.
2. Application of the primer: PRIMER PU-1050 (dry



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substrate). Apply a single coat of PRIMER PU-1050 to close all pores. Consumption: min. 200 ~ 500 g/m² dependent on the porosity of the substrate.

2.1 Possible situation: Levelling of voids and unevenness: After applying the primer, trowel apply a single coat of the mixed scratch coat. Consumption of mixed scratch coat: approx. 1.600 g/m²/mm thick-ness.

3. Installation of the conductive layer, consisting of:

3.1 Conductive copper ribbon: At the wall/floor junctions, bond conductive copper ribbon in strips of

maximum 1.0 m in length at intervals of 5 ~ 10 m, dependent on the room geometry. Note: Connect the copper strips to earth on site (potential equalisation).

3.2 Conductive lacquer: Apply a single coat of PRIMER AS-1010 by roller. Consumption: approx. 100~120 g/m². Note: Before applying the finish coat, test the electrical resistance. The bleeder resistance must be < 104 Ω.

4. Application of the conductive finish coat: Apply **TECNOCOAT P-2049 AS** to the required thickness by the method described (see above).

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: 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-2049AS** 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 PU-1050- PRIMER EPw-1070-PRIMER PUc-1050: 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 specifications).

PRIMER AS-1010: This is a conductive primers are applied on the substrate

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.

TECNOTOP 2CP-: Dual-component coloured aliphatic polyurethane varnish used to protect against UV rays and



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chlorinated water when waterproofing swimming pool, lakes and aquariums.

TECNOPLASTIC C or 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.

DESMOSEAL MASILLA PU: Polyurethane mastic for filling joints (use together with TECNOBAND 100 when necessary).

APPLICATION REQUIREMENTS (MACHINE GUN):

- Heater temperature: 75°C
- Hose temperature 70°C ~75°C
- Pressure: 2700 ~ 2900 psi (180 ~ 200 bar)



Applus⁺

TECNOPO SISTEMAS

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PROPERTIES:

PROPERTIES	VALUES	RESULTS	METHOD
Density	kg/m ³	1.100	BS 4370 PART 1 METH 2
Elongation at break at 23°C	%	>300	ISO 527
Tensile Strength at 23°C	23 MPa initial ~ 17 MPa a 25 years		UNE-EN ISO 527-3
Hardness (Shore A)		>90	DIN 53.505
Hardness (Shore D)		>50	DIN 53.505
Working life	W3 25 years and 1,4 mm of thickness		
Climatic zone	S (hard weather)		
Surface temperatures	-20°C ~ 90°C		
Resistance to water vapor diffusion	μ	2.279	UNE EN 1931
Water vapor diffusion	g/(m ² / d)	14	UNE EN ISO 7783
User load	P4 (green roof, heavily loaded)		
Roof slope	S1~S4 ($\geq 0^\circ$), zero slope		
External fire behavior	Class. Broof (t1)		UNE-EN 13501-5:2007 A1:2010
Fire reaction	Euroclass F		
Resistance to movement	according at 1.000 times		EOTA TR-008
Gel time	$\pm 3 \sim 5$ seconds		
Cured time	± 12 hours		
Solids (VOC zero)	100%		
Anti roots	YES		UNE-EN 13948:2008
Chemical resistance	Resistant to many products and chemicals (consult technical department)		
Thermal resistance	It behaves consistently with temperatura range of: -40°C ~ +180°C		

Applus⁺**TECNOPOL** SISTEMAS