TECNOCOAT H-2049 LV - LOW-VISCOSITY POLYUREA MEMBRANE FOR WATEPROOFING AND COATING

Two component, low-viscosity, sprayable, aromatic coating suitable for waterproofing, protection, and sealing. It's made up of two high reactive liquid components, Tecnocoat P-2049/A (isocyanates) and Tecnocoat H-2049-LV/B (resins), mixed together using our specific proportioner TC2049 or similar, to form a solid, continuous, watertight and waterproof, seamless, high-density polyurea membrane, with mechanical qualities especially for **protecting the spray polyurethane foams systems TECNOFOAM (SPF).**

USES

For application in the following situations:

- Flat or sloped asbestos roofs (used with TECNOFOAM, spray polyurethane foam system)
- As a protection for SPF (TECNOFOAM spray polyurethane foam system)
- Furniture and thematizations
- Vehicle and boat coatings(bed liners)
- ROOFING: Sloped/flat walkable roofs, IRMA, balconies, and overhangs
- Concrete decks, retaining walls, and foundations (EN-1504)

NOTE: call our technical department about the application to other substrates or scopes of use

Minimum thickness	1.5 mm
Tack-free time	±20 secs
Tensile strength	±13 MPa
Elongation	>250 %
Shore A/D hardness	>85 / >45
Application method	Medium pressure spray equipment
VOC(volatile organic compounds)	0

COLORS

	Gray

GENERAL SPECIFICATIONS

- Two component, 100% solids content, low viscosity, aromatic polyurea that once applied, forms a stretchable, continuous, seamless, waterproofing, and solid membrane that offers a waterproofing and watertight behavior.
- It is also possible to apply it on flat or sloped walkable roofs, pedestrians, concrete slabs, foundation walls.
- It has CE marking on the basis of a statement made DoP Declaration of Performance (DoP) conforms to the UE 305/2011 regulation.
- The application and training are done by our spray equipment TC2049 (spray-equipment.tecnopolgroup.com) or similar
- Thanks to its versatility and its tack-free time of approx. 20 seconds, allows the adherence to any surface, making it the ideal product for application on uneven surfaces and in areas of any shape, whether curved or squared.
- Due to its resistance, it can be walked on and it will accept a rough finish to make it non-slip. (using Silica Sand or Tecnoplastic range aggregates)
- A ceramic floor can be placed on top. In this case, we recommend applying a thin coat of **Primer PU-1030,** Primer PU-1000 or Primer PU-1050, consumption of around 50 to 60 g/sqm, and spreading Silica Sand on top, consumption of around 700-1000 g /sqm, to improve mechanical anchorage.
- Joints and any type of union are saved since the finish is uniform and in one piece, providing a surface with optimal maintenance and cleaning.
- Has properties to allow it to adhere to most surfaces such as concrete, ceramic tiles, metals, spray polyurethane foam (Tecnofoam), plywood(OSB), asphalt/bituminous sheets. In any case or material, the surface must be consistent and sound (*concrete pull-off strength >1.5 MPa)*, clean, and dry when the products are applied. Recommended applying directly on the concrete deck.
- Free from harmful VOC compounds, therefore, it does not hurt the ozone layer (VOC's zero). It's 100% recyclable by mechanical means friendly to the environment; no gas collection for recycling and/or destruction is required; it doesn´t emit substance to the environment once installed..
- It 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.
- It is an aromatic membrane and, even though it is stable against solar radiation it requires solar radiation protection (UV rays) to do not lose its physical and mechanical properties. Therefore, this system needs a protective polyurethane colored aliphatic resin, Tecnotop 2C, for use in the absence of other physical protection elements. You can apply Tecnotop S-3000, Tecnotop 2CP or Tecnotop 1C also.

YIELD

The recommended minimum thickness is 1.5 mm. (60 mils DFT), total yiedl is 1.7 kg/sqm, applied in various coats. The total thickness may vary according to substrate or climatological conditions.

PACKAGING

Metal drums of 225 kg each component (B side: resins and A side: isocyanates).

STORAGE AND SHELF LIFE

12-months shelf life is stored in original containers in a dry environment at a temperature between 5-35 ºC *(41-95°F)*. Keep away from direct sunlight, extreme heat, cold or moisture. Prior to application, B side must be thoroughly mixed with a drum mixer before inserting the transfer pumps and use. This step is very important, please consult your representative for recommendations.

APPLICATION METHOD

Cement or concrete substrates: 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. Concrete must be strong, cohesive and dry, having a correct planimetry, high surface resistance, eliminating laitance, graise, oils or release agents, without excessive irregularities. Therefore, the previous action of sanding, polishing, milling or shot-blasting will be assessed by the applicator to achieve a preparation of the substrate according to ICRI Guide 03732, CSP values 3 to 5. Existing holes or areas with a lack of material must be repaired using some of our epoxy resins: Primer EP-1020/Primer EP-1010. Mastic PU must be used on fissures or small cracks on the surface. In joints (width < 15 mm): remove old material, clean and fill with Mastic PU. In joints (width >15 mm): remove old material, clean and fill with Mastic PU. Complement with a Tecnoband 100 band on the upper part. In structural/expansion joints: remove old material, clean and fill with Mastic PU. Complement with specific elastic bands and Tecnoband 100. General cleaning of the substrate. PRIMING: use Primer PU-1050/Primer PUc-1050, Primer EP-1020, Primer EP-1010 or Primer WET, depending on the existing moisture in the substrate.Apply/spray the membrane. Aliphatic polyurethane as an aliphatic topcoat: Tecnotop 1C/2C/2CP.

Ceramic tiles substrate: Ceramic surfaces should not have empty joints or loose elements or parts. These should be filled with Mastic P-2049 mastic or mortar, according to their size. Existing joints or seals: remove the old material, clean up and fill with Mastic P-2049. Sanding with specific equipment. Thereby, to remove moss or solids particles bonded to the substrate, and opening the pore. Clean up, using a vacuum method. PRIMING: use Primer EP-1040, Primer EP-1010 or Primer EPw-1070, depending on the existing moisture in the substrate. Apply/spray the membrane. Aliphatic polyurethane as an aliphatic topcoat: Tecnotop 1C/2C/2CP.

NOTE: For other types of substrates, weather conditions or the substrate to be applied, consult our technical department.

REPAIR AND OVERLAPS PROCESSES

REPAIR: In cases where the membrane repair by accidental causes, or assembly procedures not covered installations, shall be as follows: Cut, removal of the affected area and/or damaged surface. Sanding this area extending about 20~30 cm. around the perimeter, for overlapping security. Cleaning (vacuuming) of waste generated (powder, dust...); if it's possible don't use water, and if used, support humidity value; ketones applicability based solvents for reducing this type of surface cleaning. Apply a thin layer (100-150 g/sqm) of polyurethane resin Primer PU-1030, Primer PU-1050, Prim er PU-1000. Light spread Silica Sand over the wet primer applied before. Wait for the total drying. Apply/spray the membrane evenly and in several layers until the dry film thickness required by the project is achieved. Application of the aliphatic polyurethane resin for protection against UV rays Tecnotop 2C/2CP/1C

OVERLAPS: In cases has been exceeded recoat time (24~48 hours), so the waiting time between jobs is prolonged, proceed as follows: Sanding strip longitudinal overlap of about 20~30 cm. wide. Cleaning (vacuuming) of waste generated (powder, dust...)or existing dust; if it's possible, do not use water, and if it's used, check the support humidity value; ketones applicability based solvents for conducting this type of surface cleaning. Apply a thin layer (100-150 g/sqm) of polyurethane resin Primer PU-1030, Primer PU-1050, Prim er PU-1000. Light spread Silica Sand over the wet primer applied before. Wait for the total drying. Apply/spray the membrane evenly and in several layers until the dry film thickness required by the project is achieved. Application of the aliphatic polyurethane resin for protection against UV rays Tecnotop 2C/2CP/1C

APPLICATION REQUIREMENTS (PROPORTIONER)

It is necessary to mix the two initial liquid components using a high-pressure plural component proportioner; isocyanates and resin must be mixed 1:1 in volume using our spray equipment TC2049 (spray-equipment.tecnopolgroup.com) or similar (proper maintenance and cleaning it is recommended). The general parameters for material area as follows:

- Isocyanate heater temperature:60-65ºC *(140ºF to 149ºF)*
- Resin heater temperature:60-65ºC *(140ºF to 149ºF)*
- Hose temperature:±65ºC *(149ºF)*
- Working pressure: 2,500 - 3,000 psi *(170 to 205 bar)*
- Recommended mixing chamber: GU-07008-1 or GU-07008-2

These temperatures and pressure parameters must be valued, ratified or slightly varied by the applicator, depending on the conditions of each climatic zone, weather situation or according to the specifications of the projection equipment. It is the responsibility of the owner / applicator of the equipment to keep it in perfect condition in order to maintain the correct mixing ratio of the two components that Tecnopol delivers separately, by periodically updating its maintenance controls. During the execution of the application, it may be necessary to correct these parameters according to changing external conditions, as well as to verify the correct operation of the machine (pressure and temperature). The part B must be thoroughly mixed with an mechanical mixer before inserting transfer pumps. Isocyanate are sensitive to moisture, ensure the drums and spray equipment are protected from moisture during storage and application. Store and clean proportioner by manufacturer's suggested guidelines.

HEALTH AND SAFETY

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 the air. Waste: Waste generation should be avoided or minimized. Incinerate under controlled conditions in accordance with local laws and national regulations. Re-occupancy of the work site without respiratory equipment is minimum 24 hours providing the correct ventilation for the area sprayed. Contractors and applicators must comply with all applicable and appropriate guidelines for storage and safety guidelines.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. Dispose waste in accordance with star or/and local regulations.

TECHNICAL AND CHEMICAL PROPERTIES

PROPERTIES	RESULTS
Density ISO 1675	1.15 g/cm³ ±0.03 g/cm³
Density compounds* A/B ISO 1675	1.10±0.05 g/cm³ / 1.09 ±0.05 g/cm³
Viscosity compounds* A/B (at 12 rpm) ISO 2555	300±50 cps / 800±50 cps
Mixing ratio (weight - volume)	100/102 - 100/100
Tack-free time / recoat time	±20 secs / 20 secs ~ 48 hours
Use temperature range (environment)	-10 ~ 90 ºC *(14 to 194ºF)*
Application temperature range (substrate and environment)	5~ 35 ºC *(41 to 95ºF)*
Maximum environmental humidity	±80%
Elongation at break ISO 527-3	>250%
Tensile Strength ISO 527-3	>13 MPa
Hardness Shore A/D DIN 53.505	>85 / >45
VOC content	0
Solid Content ISO 1768	100%
Construction element slope	zero slope, ponding water admitted
	100%
Adherence to concrete	> 1.5 MPa
Fire reaction	NPA

Results performed in the laboratory at 25ºC (73ºF) and 50% RH, under controllable conditions. These values may vary depending on the application, climatology, or substrate conditions.

** Data for component B pigmented in gray. For other colorations or neutral, consult the official COA issued by Tecnopol (Certificate of Analysis for each batch delivered). Results were performed in the laboratory at 23ºC and 50% RH, under controllable conditions.*