# PUR M50 – Single-component polyurethane

## DESCRIPTION

Single-component aliphatic polyurethane with a satin lacquer finish, suitable for protecting polymeric flooring, concrete, self-levelling cementitious products, etc., increasing their resistance to abrasion and wear. For decorating and protecting all types of surfaces.
Coating formulated from aliphatic and pigmented polyurethane resins. Single-component, fast-drying coating.
High chemical/mechanical resistance.

## ADVANTAGES

- ✓ High solids content.
- ✓ Good colour and gloss retention.
- ✓ Fast drying. Allows traffic to resume in a short period of time.
- ✓ Very good resistance to wheeled traffic.
- ✓ Excellent covering power.
- ✓ Very good levelling power.
- ✓ Good chemical resistance.
- ✓ Suitable for outdoor use.
- ✓ Does not leave knee marks, joints or ridges.
- ✓ Low odour.
- ✓ Reusable once the container has been opened.
- ✓ Good impact resistance.
- ✓ Semi-flexible.

## RECOMMENDED USES

Typical uses:
Used on concrete and cementitious surfaces, metal supports (walkways) and vibrating floors exposed to heavy traffic and mechanical stress. Its high hardness and low odour make it suitable for painting floors such as:
Car parks, industrial flooring, automotive, washrooms, corridors, warehouses, etc.

Anti-slip mode: incorporate silica, corundum or bauxite aggregates of a selected grain size to give the finish a rough, non-slip feel, but a smooth appearance.

Floor coating is highly versatile due to its single-component nature, which makes it easier to work with as it has no pot life.

## PRESENTATION

Colours: White, grey, red and any colour from the RAL chart.
Satin finish.
Formats: 20 kg

## TECHNICAL CHARACTERISTICS

Appearance: Satin. Other finishes available on request.
Colour: According to the RAL chart.
Substrate: Concrete, cement, plaster, brick, stone, fibre cement and previously prepared surfaces.
Practical coverage: 6 to 8 $m^2$/kg per coat (depending on the type of substrate and application conditions).

Drying time:
To touch: 30 minutes to 1 hour (at 20 °C and 60% relative humidity).
Pedestrian traffic: 6 hours.
Vehicle traffic: 8 hours.
Total resistance: 5 days
Repainting – approx. 4 hours.
No. of coats: 2. Supply of 0.150 kg/$m^2$ per coat.

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| **Composition** | Fixed vehicle | Aliphatic polyurethane resins. |
| | Pigments | Titanium dioxide. |
| | Solvent | Hydrocarbon mixture. |

**Density** 1.30± 0.02 kg/L.

**Solids.** 80-85% depending on colour.

**Performance.** 7 $m^2$/kg, one coat.

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| **Drying** | To the touch | 30 min. |
| | Total | 6 hours |
| | Repainting | Minimum 12 hours. |

## APPLICATION

**Coats** Apply 2 coats. 3 coats recommended.

**Recommended thickness** 150 g/$m^2$ per coat.

**Dilution** 5% maximum, with polyurethane solvent.

**Application temperature** Ambient temperature between 5 and 30 ºC.

**Application tools** Tools: Short-haired roller, good quality enamel roller, polyurethane foam with pore size 1 and airless equipment.

Mix thoroughly before application using a low-speed mixer.

## SURFACE PREPARATION

**Surface preparation:**

**New surfaces:**

Wait for the cement to cure completely (approximately 1 month). Plaster must be dry, clean and free of dust, grease, mould, algae and other contaminants.

Mechanical treatment using a SAT diamond disc machine followed by vacuuming.

Repair cracks, fissures and cavities using PR EPOX 100S epoxy resin
100% solids, thixotropic.

Apply a coat of EPOXI AL AGUA primer to loose, absorbent or highly alkaline surfaces. In the case of efflorescence or saltpetre, treat with a diluted PR EPOX W20 acid solution, rinse with plenty of water and leave to dry.

It is essential to regulate the porosity of the floor so that it is sufficiently suitable to promote the penetration and anchoring of the paint. The best results are obtained through mechanical methods, as these not only regulate the porosity of the substrate but also remove any unwanted substances or foreign bodies.

If mechanical treatment is not possible, at least one chemical treatment must be carried out: removal of foreign or unwanted agents using diluted hydrochloric acid, followed by removal of any acid residue with plenty of water; finally, allow the substrate to dry completely and proceed with normal painting.

**Painted surfaces:**

If the paint is well adhered, sand with a rotary machine and then vacuum to remove loose particles, clean and degrease.
On satin surfaces, sand and vacuum.
First apply a coat of WATER-BASED EPOXY primer as a bonding agent.

**Substrates in poor condition:**

If the paint is old or poorly adhered with defects such as chalking, blistering, flaking, cracking, etc., remove any residue mechanically, repair cracks or damage and apply a coat of WATER-BASED EPOXY primer.

**Metal substrates:**

Treat with the appropriate primer beforehand. (Anti-rust epoxy primer).
Application conditions:
Application: Brush, roller or airless spray.
Mixing: Dilute by a maximum of 5%.
Solvent: Polyurethane solvent.
Cleaning of tools: Solvent.
Working temperature: Minimum: 10°C. Maximum: 60°C.
Substrate temperature: 2 to 3°C above the dew point.
Relative humidity: Less than 80%.

**IMPORTANT**: In high humidity conditions or below 10°C, DO NOT HARDEN. - Do not apply the paint to surfaces that are very hot due to exposure to the sun.

Surfaces in general must be clean, dry and free of grease, dust and rust. Clean, dry and well-cured floor (28 days)
Residual floor moisture below 6%.
Preferably rough to improve adhesion.
On unpainted surfaces: Apply 2 or 3 coats as required (the first coat slightly diluted). On surfaces with old paint: Remove the paint in poor condition and proceed as for unpainted surfaces.

**COLD MATERIALS:** When dealing with epoxy resins and urethanes, cold material will result in slower than normal curing times and may affect their physical properties once cured. Cold materials are more difficult to mix, spread and level. Before applying materials in cold temperatures, they should be stored in a heated environment or in a heated storage container at the ideal temperature indicated on the Product Data Sheet. The longer the materials can be stored in a temperate environment, the better they will perform.

• **COLD AMBIENT TEMPERATURES:** This condition will also cause epoxy and urethane materials to cure more slowly than normal. It will also make them more difficult to spread and level. It can cause bubbling/blistering problems because the viscosity of the epoxy has increased due to the colder temperatures, preventing trapped vapour from escaping from the substrate. Before application, the temperature in the application area should be at normal service temperature for a minimum of 48 hours. If necessary, use forced heat from portable heaters.

• **COLD SURFACE TEMPERATURES:** Concrete surfaces with a temperature of 10oC or below will drastically slow down the normal cure of epoxies and urethanes and may reduce the cure by 6 hours or more. It may also affect the physical properties of the cured membranes, causing some epoxies to become flexible. Cold substrate temperatures can prevent epoxies from "wetting out" or penetrating the concrete surface, causing adhesion problems. Prior to application, service temperatures should be at normal operating conditions, a minimum of 15°C, for a minimum of 48 hours. If this cannot be achieved, the use of forced heat may be necessary.

• **BASEMENTS, POORLY VENTILATED AREAS:** in poorly ventilated areas or basements, relative humidity due to condensation reaches levels at which the products suffer various

consequences in the finishes. These range from condensation marks in the environment to curing of the product itself.

• **RECOMMENDATIONS:**

1. Air renewal with ventilation equipment before, during application and during the curing process
of the materials.
2. Use a heat gun covering the entire area. This will help eliminate moisture, achieving a suitable temperature for both the substrate and the environment for the application of the products.
3. Never apply epoxy, polyurethane or acrylic below 10°C.
4. The substrate and ambient temperature must be at least 3°C above the dew point during application.

**HOT SUBSTRATE / AND OR MATERIAL:** Substrates exposed to high temperatures exceeding 26°C directly affect the physical and chemical properties of the materials. The direct effects on application are that, depending on their nature, the materials will experience causes and effects such as: cracking, micro-cracks, orange peel, accelerated drying with loss of properties, colour changes, loss of levelling, etc.

• **RECOMMENDATIONS**

Do not apply at ambient temperatures above 25°C.
Do not apply outdoors during the hottest hours of the day.
Do not expose materials to high temperatures or storage in direct sunlight. Do not apply if the substrate is at a temperature above 30°C.

**CONSERVATION**

Easy to homogenise by stirring well after 12 months' storage in a closed container. Does not form skins, clots or gels. Keep away from temperatures below 5°C.

## *SAFETY*

In general, avoid contact with eyes and skin, wear gloves, protective goggles and appropriate clothing. Keep out of reach of children. Use only in well-ventilated areas. Do not dispose of waste in drains. Keep the container tightly closed and in a suitable place. Ensure proper transport of the product; prevent any accidents or incidents that may occur during transport due to breakage or damage to the container. Keep the container in a safe place and in the correct position. Do not use or store the product in extreme temperatures. Always comply with current legislation on the environment, hygiene, health and safety at work. For further information, it is essential to read the product's SAFETY DATA SHEET.
It is advisable to periodically check that this Technical Data Sheet is up to date.
Pinturas Pinay guarantees that its products comply with the specifications set out in the technical data sheets. The technical advice provided by Pinturas Pinay, before or after delivery of the products, is purely indicative and given in good faith and to the best of its knowledge, in accordance with the current state of the art, but without any guarantee as to the final results, as these depend on conditions of use that are beyond our control. All our sales are subject to our general terms and conditions of sale, which we recommend you read.

Consult the label and Safety Data Sheet.

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