



# DENVERCOAT PU FLEX

Polyurethane-Based Flexible Protector Coating



**DENVERCOAT PU FLEX** is a flexible waterproof coating, of high performance and resistance, based on reactive polyurethane, cold application, making a monolithic membrane resistant to aggressive environments due to its excellent physical-chemical stability, adherence, stability and durability.

## USES

It is specially recommended to concrete waterproofing and protection subjected to extremely work conditions, suitable to effluent restraint, abrasion and waterproofing, gas tight, and chemical aggressive agents, in tanks frameworks and restraint barriers, industrial slabs, gravestones, gutters, curtains, reservoirs, foundations, basements etc.

## ADVANTAGES

- ❑ **Product with high solid content.**
- ❑ **Easy application through with roller, chisel or bristle sweeper.**
- ❑ **Cold application, it produces a flexible monolithic membrane of excellent resistance against aggressive environments and with high service life.**
- ❑ **It has a VOC low level.**

## STANDARDIZATION

**NBR-9575** – Waterproofing – Selection and design, classified “**Polyurethane membrane for tightness**”.

**NBR – 15487** – Polyurethane membrane for tightness.

## TYPICAL PROPERTIES

The following properties were obtained in laboratory tests. Test values of new lots may present small variations.

### Denvercoat PU Flex

Test	Specification	Standard
Specific mass (A + B)	1.40 a 1.50 g/cm <sup>3</sup>	NBR 5829
Brookfield Viscosity (A+B)	20000 a 30000 cP	NBR 5849
Solid content	100 %	NBR 7340

### Denvercoat PU Flex

Test	Specification	Standard
Pot life	up to 30 min	Petrobrás N1363 SSPCP 68T

Touch drying	1 to 2 hours	
Drying between coatings	2 to 6 hours	
Use release	< 24 hours	
Total curing time	7 days	
Tensile strength	> 8.0 MPa	NBR 7462
Rupture Elongation	> 120 %	NBR 7462
Permanent Deformation	< 15%	NBR 7462
Abrasion resistance, Taber 1000 cycles / 1000g / CS 17	0.42 g	ASTM 4060
Water absorption	< 0.55 %	ASTM D 570
Hardening, Shore A	80 a 90	NBR 7456
Flowing at 120°. C	Without flowing	NBR 9952
Flexibility at – 15°. C	No cracks	NBR 9952
Adherence Resistance with Denverprimer Epoxy	> 2.50 MPa	NBR 14050
Adherence Resistance without using primer	> 1.60 MPa	NBR 14050

## APPLICATION METHOD

### Surface preparation

Surface to be subjected to waterproofing shall be clean, dry, completely cured, with no oil, greases and loose particles of any kind.

Execute regularization with sand and cement mortar, straight, trace of 1:3 in volume, minimum dropping of 1% directing to the graters. Edges and corners must be rounded.

Graters and emerging piping shall be fixed to make possible a perfect finishing execution. Impermeabilization must be performed on baseboards at 30 cm of minimum height over the finished pavement.

Graters, joints and cracks must be calked.

**NOTE:** In areas subjected to groundwater, negative or osmotic pressure, moistened or where the concrete isn't completely cured it important a previous application of **Denverprimer Epoxy**.

### Mixing Preparation

Add component B to component A do **Denvercoat PU Flex** and using a drill mach with an adapted plunger, homogenize the mixing for 3 minutes.

### Application (without using Denverprimer Epoxy)



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Apply the first coating of **Denvercoat PU Flex** on the clean and completely dry surface, using a wooden scraper or mortar board and spreading with a short sheep hair roller may be performed soon after.

After product touching drying, apply subsequent coatings until achieving the minimum recommended consumption related to the application, which is variable according to the environment aggressive and framework efforts. Wait for the curing and, then, put in use.

### Application (using Denverprimer Epoxy)

It's recommended to use **Denverprimer Epoxy** in areas subjected to osmotic pressure, groundwater, concrete nor completely cured, residual moisture or in substrates with high absorption.

Apply one or two coatings of **Denverprimer Epoxy**, wait for the drying and proceed applying the first coating of **Denvercoat PU Flex**.

Wait for the drying of **Denverprimer Epoxy** and proceed applying the first coating of **Denvercoat PU Flex** on the clean and completely dry surface, using a wooden scraper or mortar board and spreading with a short sheep hair roller may be performed soon after.

After product touching drying, apply subsequent coatings until achieving the minimum recommended consumption related to the application, which is variable according to the environment aggressive and framework efforts. Wait for the curing and, then, put in use.

### Framing

It's recommended to embody in the entire membrane in extended slabs and other critical points as water outlets, emerging piping, joints, cracks or baseboards.

### Separating layer

In extended slabs, it's recommended to apply a separating layer, with bituminized Kraft paper or polyethylene film of a suitable gram - **Denver Camada separadora**.

In small areas or tank floors, where a coating or a pavement will be applied over the product, **Denverpiso Agregado** must be aspersed over the last coating of **Denvercoat PU Flex** to guarantee the mortar adherence.

### Areas exposed to meteorological conditions

It shall be applied a protection layer compatible to "Top Coating" with 1 or 2 layers of **Denvercoat Poliuretano**, aliphatic polyurethane based paint, in areas exposed to meteorological conditions.

### OBSERVATIONS

- Drying period of time of 24 hours between coatings shall not be exceeded.
- Perform tightness test after applying waterproofing and maintaining the area tight with water during 72 hour minimum, making possible to detect any application failure.
- In case of using framing as a screen or a no polyester fabric lay it without grumes or folding and embodying soon after the first coating, and applying subsequent coatings until the framing is completely covered by the **Denvercoat PU Flex** membrane.
- Regulating mortar shall be free of lime or water repellents.

### APPROXIMATE CONSUMPTION

Denvercoat PU Flex	1.4 kg/m <sup>2</sup> /mm
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### PACKAGING

Denverpren PU	Gallon with 5.0 kg (A + B)
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### RECOMMENDED CONSUMPTION

Slabs, gravestones, gutters and impermeabilization in general	Higher than 2,8 kg/m <sup>2</sup>
Tanks, bails and restraint pools*	2.8 to 7.0 kg/m <sup>2</sup>

\* Variation according to effluent aggressiveness and amount of reinforcing screens.

### STORAGE

Store in a covered, dry, ventilated location and in the intact packages in a temperature equal or below 25°C.  
Shelf Life: 6 months

### CLEANING

Equipment and tools should be cleaned with thinner or **Denversolvente 300**.

### HANDLING AND SAFETY

- Denvercoat PU Flex** should not be neither ingested or be in contact with the skin and eyes. In case of accidental ingestion don't induce vomit and seek prompt medical care.
- When the product comes into contact with the skin, remove the vegetal oil soaked cloth, rinse with clean running water and apply moisture cream. If there is contact with the eyes, rinse them with clean running water and seek medical care.
- Don't smoke.



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- ❑ It is recommended to observe the safety regulations established by the relevant bodies and to use suitable PPEs, including safety goggles, breath devices and tightness gloves. It is recommended to use specific creams as additional skin protection.
- ❑ Don't reuse the packages
- ❑ As it is a solvent based product, it's not advisable its use in an enclosed space. If it is necessary to use it in an enclosed area it's recommended to use forced ventilation during application.
- ❑ Use explosion proof mixing equipment and keep product far from ignition sources;
- ❑ When there is gas or liquid leakage or spreading, evacuate the location, keep ignition sources far from the location and control leakage with sand.
- ❑ **Denvercoat PU Flex** is flammable. In case of fire, use water and foam. Don't use water under pressure.
- ❑ **For more information about handling and safety, request the product SISCP<sup>2</sup>.**

## PERFORMANCE

DENVER IMPERMEABILIZANTES guarantees the quality of the product against manufacturing defects; however, it does not assume responsibility for the performance of the work, since it does not have direct control over the application conditions. Any indemnification will be limited to the cost of the product.

DENVER IMPERMEABILIZANTES informs that it may alter the product whenever necessary, without prior notice.

DENVER IMPERMEABILIZANTES products should be applied by trained professionals and in compliance with the instructions listed in the application manuals provided by the company.

If you have questions, call:

Customer Service Center: (+5511) 4741-6000 (São Paulo)

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<sup>2</sup> Safety information sheet for chemical products.

- ❑ The product names are registered trademarks of Denver Impermeabilizantes Indústria e Comércio Ltda.

- ❑ Denver Impermeabilizantes manufactures a complete line of chemical products for construction. Contact us for more information, training, literature, or technical support.