

TECHNICAL DATA

DRYTEX PR 3000

sprayed on pure- polyurea coating or lining

1. Characteristics:

DRYTEX PR 3000 is a very fast set, premium, 2-component 100% solids coating/elastomeric derived from a reaction of an Isocyanate Pre-Polymer and an Amine terminated resin blend. This general purpose "Pure" Polyurea has been especially designed to protect and coat most all surfaces assuring enduring pore density. The product reacts within seconds and once cured, leaves flexible, durable, tough surface. It is extremely effective when used as a protective coating whether applied over concrete, steel, any other surface or as a substrate on Geotextile fabric. The material must be applied utilizing high pressure, heated plural component spray proportioning equipment.

2. "DRYTEX PR 3000" at a glance:

PURE Polyurea utilization even under extreme climatic conditions

Fast reactivity and cure times from 5 seconds up

Fast return to service time > long life-cycle > almost maintenance free > significant savings

Anti corrosive & waterproofing excellent adhesion on concrete, steel, aluminum, plastics, fibers, wood, foam etc. Hydrolysis firm > non sensitive to humidity Resistant to most aggressive chemicals, solvents, acids and caustics High impact & abrasion resistance, maintains flexibility Seamless and joint-less coating and lining, solid, high application thickness possible Allows accurate reproduction of surface detail

High elongation at break Very good tensile and structural strength 100% solids, VOC-free, no solvents

Little or no odor without the use of catalysts excellent muffling of noises UV- , chlorine- and saltwater resistant High abrasion resistance Thermal stable Broad colour spectrum (RAL)

3. Applications:

Industrial & manufacturing facilities, storage, load and high traffic areas Water- and wastewater treatment, containment areas, landfill, manholes, sewer-lining Refineries, pipelines, tank coating, gas-stations, car-wash Pools, reservoirs, digester-towers, storage tanks, active carbon tanks Roofs, park decks, garages, ramps Airports, shipbuilding, marine, mining Wind energy plants (on-off-shore), blades, biogas reactors, cooling towers, pylons Bridge-, street- and tunnel construction Wear and tear parts, platforms, vibrating stoker, edge guard, belt-conveyors Leisure parks, biotope, building wet areas, foundations/basement , playgrounds, slip-hazard areas ,Molds, furniture industry

Orgin_Germany



ORGANIX

engineered to perform

ORGANIX
BUILDING SYSTEM

TECHNICAL DATA

DRYTEX PR 3000

sprayed on polyurea coating or lining



ORGANIX

4. Processing Properties:	Data EU	Data US	
Mix Ratio	1:1 (volume)	1:1 (volume)	
Theoretical coverage	1m ² = 1l = 1mm (1:1:1)	1m ² = 1l = 40mil (1600sq.ft./1gal/1mil)	
Recommended thickness	minimum 1,5mm	minimum 60 mil	
Maximum thickness	Unlimited	unlimited	
Recoat time *	0 – 12 hr.	0 – 12 hr.	
Working time * (Pot life)	5-15 sec	5-15 sec	
Tack free *	15-30 sec	15-30 sec	
Cure to dry service *	after 30-60 min	after 30-60 min	
Ultimate cure *	after 3-4 days	after 3-4 days	
Temperature (ambient)	-30°C to +50°C	-22°F to +122°F	
Temperature (substrate)	+5°C to +80°C	+41°F to +176°F	
Service temperature (Polyurea)	+70°C to +80°C	+160°F to +176°F	
5. Physical Properties:	Data EU	Data US	
Chemical base (A) Chemical base (B)	Isocyanate Amine	Isocyanate Amine	
Solids	100%	100%	
Solvent (VOC)	0%	0%	
Viscosity (A)* Viscosity (B)*	~ 700 mPa.s ~ 650 mPa.s	~ 700 cP ~ 650 cP	
Density (A) * Density (B) *	1,12 g/cm ³ 1,04 g/cm ³	1,12 g/cm ³ 1,04 g/cm ³	
Shore Hardness (A) Shore Hardness (D)	~ 90 Sh-A ~ 57 Sh-D	~ 90 Sh-A ~ 57 Sh-D	ASTM D-2240
Thermal stability	-50°C to +150°C	-58°F to +300°F	
Abrasion resistance (CS 17,5g/1000cycles)	< 5,9mg	< 5,9mg	ASTM D 4060
Tensile strength -DIN ISO 527/2/5A/500	~ 23,9 MPa (N/mm ²)	~ 3465 psi	ASTM 412
Tear strength	~ 3,1 MPa (N/mm ²)	~ 460 psi	ASTM 624-C
Peel strength	~ 6,2 MPa (N/mm ²)	~ 900 psi	
E-Module -DIN ISO 527/2/5A/500	~142,7 MPa (N/mm ²)	~ 20960 psi	
Elongation -DIN ISO 527/2/5A/500	~ 385 %	~ 385 %	ASTM 412 C
Change in volume	< 1%	< 1%	
Fire rating -DIN4102 Part 1	B2	B2	
Sound adsorption at 2mm	< 10dB (A)	< 10dB (A)	

engineered to perform

ORGANIX
BUILDING SYSTEM

TECHNICAL DATA

Chemical resistance	See separate table	see separate table	
Shelf conditions	+18°C to +23°C @ 50%rF	+65°F to +73°F @ 50%rh	
Shelf life	180 days	180 days	
Standard colors (RAL) Special colors on request	sand yellow (1002), sky blue (5015), grass green (6010), mouse grey (7005), anthracite grey (7016), graphite black (9011)	sand yellow (1002), sky blue (5015), grass green (6010), mouse grey (7005), anthracite grey (7016), graphite black (9011)	

6. Surface preparation:

Mechanical preparation: In many cases surfaces such as concrete, metal or existing previous coatings are contaminated. These areas need to be cleaned mechanically. In general all surfaces must be dry, clean and free of oil, grease, dust and other contaminants. Various methods like grinding, grit blasting or blast-cleaning with sand or water produce a rough, even surface in addition to cleaning it thoroughly. These methods improve mechanical adhesion substantially.

Chemical preparation: Priming is always recommended after preparation of the surface area. Primers secure pore density, level the surface, take care of voids and subsequently improve adhesion properties. The amount of primer required depends on the absorbency of the substrate and may differ from 0,1l/m² (metal) to 0,6l/m² (concrete). The temperature of the area to be primed should not be less than +5°C (41°F). To avoid condensation it has to be watched in particular at high temperatures and high humidity that the surface temperature during the application and the curing process is at minimum 3°C (37-38°F) above the dew-point. Apply primer manually with a brush or core-roller. Alternatively airless-application is an option. Before continuing with Top Coat the surface has to be tack free. The timeframe to observe depends on whether or not a 1-Part or a 2-Part Primer system is used. (Please take note of the technical data sheets of the different Primer products)

Important Notice pretreatment: Before starting with any coatings adhesive pull-strength measures of the substrate should be taken. The target value of the pull-off-test should not fall short of 1,5 Mpa, to ensure a sustainable layer of coating. Most failures in the performance of surface coatings can be attributed to poor surface preparation. Always observe correct and proper preparation in accordance with the standard of the industry and existing mandatory regulations.

Concrete: Concrete must have a 28 day cure prior to application. Remove any curing agent, from release materials, oils, wax, moisture or any material that may affect bonding. Mechanical and chemical preparation of the surface is always recommend. Depending on the Primer system used the grip between coating-material and surface may be improved by scattering sand into the material. Perform a moisture vapor test before making the coating application on concrete. The residual moisture content should not exceed 5% on a depth of 20mm. To avoid backside water-vapor-pressure and in case of high humidity a moister barrier may have to be applied.

Steel, Cast-Iron: Metal surfaces too must be free of any residues. Sanding and scuffing of the original paint finish down to the blank metal is required to get best bond. Welding seams and edges have to be abraded. The quality of the depth of the profile of the prepared surface is defined in the following guidelines: NACE-No.2; SSPC-SP10; and ISO-Sa2_{1/2}. Clean with solvent after sandblasting. In any event priming of the surface is recommended to prevent flash-rust, corrosion and to improve adhesion.



ORGANIX

engineered to perform

ORGANIX
BUILDING SYSTEM



Repair of existing coating: Polyurethane/Polyurea

According to conditions and time interval, chemically reactivate existing coatings with MEK (Methyl-Ethyl-Ketone) or else and subsequently clean with i.e. Acetone.

7. Application:

General considerations: Do not spray onto wet surfaces. Receptacles are to be opened just prior to work and both components to be protected from humidity by means of drying agents or nitrogen. Special attention must be given to surface temperature of the substrate of app. +5°C to +50°C (41°F to 125°F), humidity of max. 80% - 85% and the dew-point. In particular at low temperatures and/or high humidity, the temperature of the substrate during application and drying process has to be at least 3°C (37-38°F) over and above the dew-point-temperature.

DTPR can be applied in multiple layers to achieve the desired thickness. It should be applied in a cross-directional method, also for vertical or overhead applications. Structured or restructured surfaces can be achieved using special spray techniques. Beware of overspray. Protect surrounding areas with covers, tents or nets. Mask-tapes should be removed promptly. Dark colors don't fade as quickly as light ones. The subsequent use of an aliphatic Polyurea as a Top Coat (VIP Quick Spray Top Coat) will guarantee color stability.

Mixing: The mixing ratio of 1:1 (volume) for the two components has to be observed at all time. Never dilute *DTPR*. Isocyanate-side (A) needs little or no mixing, but has to be protected from humidity and direct sun (solar) irradiation. The Polyamine-side (B) requires premixing for about 30 min. until a homogenous, uni-coloured compound, that also ensures complete suspension of filling agents is achieved. It is absolutely necessary that the mixing process also takes place constantly during the application. Utilize a professional adjustable stirring device and mix with approximately 300-400rpm. Do not allow air to be incorporated into the product.

Equipment: *DTPR* should only be applied using a plural component, heated, high pressure

1:1 spray mixing equipment such as those manufactured by Graco, Gama, WIWA or equivalent. Adequate pressure of app. 2.140psi (150bar) and a flow rate of app. 9-15kg/min are required. Both components of the material are to be preheated if necessary to reach a working temperature of 80°C (176° F) in order to achieve optimal cross-linking. The temperature needs to be maintained constantly up to the spray gun. Under these circumstances areas of up to 1.000m² can be covered daily. The cleaning of the equipment has to take place immediately after finishing the job. Use organic solvents such as Mesamoll or equivalent to remove residues of the material. Once the material has hardened it can only be removed mechanically.

8. Miscellaneous:

Storage: *DTPR* has a shelf life of six (6) months from date of manufacture in original, factory sealed containers. Avoid exposure to direct sunlight and freezing temperatures for an extended period of time. Keep receptacles at room temperature 18°C-23°C (65°F-73°F) and place on wooden pallets to avoid direct contact to ground. Rotate drums Side-A and Side-B regularly if stored for longer periods

Packaging approx. data: Set: 2x20L cans (A:22,5kg/B:20,7kg); Set: 2x200L drums (A:225kg/B:207kg);

Set 2x1.000L IBC-Container (A:1.250kg/B:1.038kg)

Transport: Polyurea can be shipped via commercial truck, rail, ocean and air carriers. The A-side (Isocyanate) is unregulated. The B-side (Amines) shipped as a corrosive (ADR). For details please see current MSDS.

engineered to perform



