



MAXELASTIC[®] PUR

POLYURETHANE ELASTOMERIC MEMBRANE FOR WATERPROOFING OF ROOFS AND OUTDOOR AREAS



DESCRIPTION

MAXELASTIC[®] PUR is a one-component liquid product ready to use, based on moisture curing special polyurethane resins, that provides a high performance waterproofing elastic membrane designed for long-term protection and waterproofing of concrete, cement-based mortars, bricks, tiles, etc.

APPLICATION FIELDS

- Elastic waterproofing for all types of roofs, terraces and balconies.
- Waterproofing and protection of water tanks, reservoirs, digesters, etc.
- Waterproofing of parking decks, bridge decks and access ramps.

- Bridging, sealing and filling of hairline cracks and outstanding points subjected to movements.
- Waterproofing prior to tile in indoor or outdoor applications, such as balconies, kitchens, bathrooms, terraces, etc.
- Waterproofing of irrigation channels, pipelines, etc.
- Coating and protection of metal structures; tanks or silos, steel pipes, etc.
- External waterproofing and protection for underground concrete structures.

ADVANTAGES

- Very high elasticity at both high and low temperatures. Absorbs thermal movements of

substrate subject to extreme weather conditions as well as vibrations.

- Excellent crack-bridging ability, acting as anti-fracture membrane when it is applied on substrate.
- Forms a continuous and waterproofing membrane without joints or connections, sealing permanently cracks and fitting to the geometry of the substrate.
- Excellent adhesion on common substrates used in construction. No primers are required.
- Good chemical resistance to de-icing salts, seawater, wastewater, diluted alkali and acid solutions.
- Withstands a wide temperature range, i.e. from -40 °C to 100 °C.
- Good abrasion resistance.
- Suitable membrane for permanent immersion applications.
- Long-lasting protection compared to paints and other coatings. Maintenance-free.
- Ready to use and easy applied manually or by airless spray.

APPLICATION INSTRUCTIONS

Surface preparation

Surface must be sound, dry and clean, free from dirt, old paints, gypsum, efflorescence, greases, oils, as well as de-moulding agents, curing agents or any coating, which could affect the adhesion.

Surface damages such as defects, cavities, honeycombs, peelings and unsound areas should be restored with a structural mortar such as **MAXREST**® (Technical Bulletin n° 4). Remove all concrete around structural reinforcement affected by corrosion, clean of rust or scale and then, coat with the oxide converter and anti-corrosion protection **MAXREST**® **PASSIVE** (Technical Bulletin n° 12).

Metallic surfaces must be cleaned by sandblasting to eliminate superficial corrosion and rust, and also must be degreased, dried and free of dust.

Expansion joints and fissures subject to movements once opened up and clean, should be treated with a suitable sealant such as type **MAXFLEX**®.

Application

MAXELASTIC® **PUR** is supplied ready to use. Previous to application, stir the content of the packaging using a dry and clean tool or preferably by mechanical means with a slow speed drill (400 – 600 rpm) in order to get a homogeneous paste.

Over porous substrates, the first coat should be diluted with 10–15 % of **MAXSOLVENT**® for better penetration. For applications over low porosity substrates, glass, glazed tiles, metal, etc use the

silane-based primer **MAXPRIMER**® **PUR** (Technical Bulletin n° 231).

Apply **MAXELASTIC**® **PUR** by brush, roller, toothed trowel or airless spray, in two or three coats, with a coverage of 0,6-0,9 kg/m² per coat. Allow first coat to dry between 10 and 12 hours depending on environmental and ventilation conditions.

Waterproofing and protection of concrete, mortar, metal surfaces and other substrates: Apply two coats with a total consumption from 1,2-1,8 kg/m². On vertical surfaces, apply in three or four coats to achieve the same consumption.

Waterproofing of roofs according to ETAG 005: Apply three coats with a total consumption from 2,5-2,7 kg/m².

For outdoor application exposed to UV-rays, once **MAXELASTIC**® **PUR** had cured 24 hours, apply **MAXELASTIC**® **PUR -E** (Technical Bulletin n° 327) as UV-barrier topcoat, in one or two coats depending on type of pedestrian traffic expected, with an estimated consumption of 0,20-0,25 kg/m² per layer.

For applications subject to permanent immersion, prime the surface to be waterproofed with **MAXELASTIC**® **PUR PRIMER** (Technical Bulletin n° 194) or **MAXEPOX**® **PRIMER -W** (Technical Bulletin n° 372) with a consumption of 0,20-0,30 kg/m². Once primer has dried completely, apply the polyurethane waterproofing membrane.

For areas exposed to wheeling traffic, once the two coats of **MAXELASTIC**® **PUR** reinforced with veil **DRIZORO**® **VEIL** has dried 24 hours, apply two coats of **MAXELASTIC**® **PUR -F** as wearing protective topcoat, and broadcasting dry clean silica between coats if an anti-slippery finish is desired.

For expansion joints and cracks subject to movements, once **MAXFLEX**® **100 LM** (Technical Bulletin n° 65) has cured for 3 days, apply a first coat with 0,6-0,9 kg/m² of **MAXELASTIC**® **PUR** and spread a strip of glass-fibber or polyester veil, with 6–8 cm wide and 40-60 g/m² density such as **DRIZORO**® **VEIL** (Technical Bulletin n° 209), ensuring it is completely embedded on this fresh coat. Once it dries, apply the second coat of **MAXELASTIC**® **PUR** with a load from 0,6 to 0,9 kg/m².

Application conditions

Do not apply neither below 5 °C or when such temperatures are expected to drop within the 24 hours. Do not apply on frozen surfaces.

Do not apply **MAXELASTIC**® **PUR** above 85% of relative humidity. Surface and ambient temperature must be at least 3 °C higher than dew point. Measure the relative humidity and dew point for

applications carried out in proximities of marine environment. Do not apply if rainfall, dew, condensation or water contact is expected within the first 24 hours after application.

For applications carried out at low temperatures, i.e. less than 15 °C, high relative humidity (between 70 - 85 %) or marine environment, use a 1 kg of the catalyst **MAXELASTIC® PUR CAT** per each 25 kg drum of **MAXELASTIC® PUR** in order to speed up the curing process.

Curing

Allow a curing time of 7 days at 20 °C and 50% R.H. before permanent immersion or flood test. Lower temperature or higher R.H. increase curing time.

Cleaning

Use **MAXSOLVENT®** for cleaning tools and equipments immediately after use. Once it cures, product can only be removed by mechanical means.

CONSUMPTION

Waterproofing and protection of concrete, mortar, metal surfaces and other substrates: Apply two coats with a total coverage from 1,2 to 1,8 kg/m² (0,6 to 0,9 kg/m² per coat).

Waterproofing of roofs according to ETAG 005: Apply three coats with a total coverage from 2,5 to 2,7 kg/m² (0,8 to 0,9 kg/m² per coat), achieving an estimated dry film thickness of 1,6 mm approximately.

These figures may vary depending on porosity, texture, substrate conditions and application method. A preliminary test on-site will determine the coverage exactly.

IMPORTANT INDICATIONS

- Prior to application, surface moisture content must not exceed 5 %. Allow sufficient time for the substrate to dry after rain, dew, condensation or other inclement weather and after cleaning surface.
- Allow new concrete and mortars a curing time of 28 days before application.
- Do not apply **MAXELASTIC® PUR** above 85% of relative humidity. Use **MAXELASTIC® PUR CAT** to speed up the curing process with relative humidity close to those values.
- Do not exceed the ratio recommended when mixing with **MAXSOLVENT®** and do not use

any other different solvent. Other solvents could modify or inhibit the curing process.

- For other uses do not specified in this Technical Bulletin or further information, consult our Technical Department.

PACKAGING AND COLOURS

MAXELASTIC® PUR is supplied in 25 kg drum. It is available in white, grey, red, green and black colour.

STORAGE

Twelve months in its original unopened packaging in a dry and covered place, protected from frost and sunlight, with temperatures between 5 °C and 35 °C. Storage at higher temperatures may result in an increase of viscosity.



SAFETY AND HEALTH

MAXELASTIC® PUR is a flammable product so all storage, transport and handling precautions must be observed for this kind of product. Do not smoke in working areas and provide adequate ventilation. Keep away packaging from heat and ignition sources.

Skin and eye contact must be avoided. Safety goggles and protective gloves should be used during application. In case of skin contact, wash affected areas with soap and water. In case of eye contact, rinse thoroughly with clean water but do not rub. Seek medical attention if irritation persists. Safety Data Sheet of **MAXELASTIC® PUR** is available by request.

Disposal of the product and its empty packaging must be made by the final user and according to official regulations.



TECHNICAL DATA

Product characteristics		
CE marking. (ETAG-005. Part 6) ETA 06/0073.		
Description and Uses: Liquid applied roof waterproofing kit. Specific stipulations for kits based on polyurethane		
UNE 104.309/1-2-3		
Waterproofing. Parts 1, 2 & 3. Liquid materials for water conveyers, dams paraments and tanks used in hydraulic works. Specifications, test methods and applications.		
General appearance and colour	One-component, coloured homogeneous paste	
Density, ISO 1675 (g/cm ³)	1,40 ± 0,1	
Application and curing conditions		
Temperature / Relative Humidity, (°C / %)	Ambient	Substrate
	5 – 40 / <85	> 5 / < 5
Waiting time between applications at 20 °C (h)	10 – 12	
Drying time at 20 °C y 50% H.R., (h)	24	
Total curing time at 20 °C and 50% H.R. for covering with ground, mortars, tiles or for permanent immersion or flooding test, (d)	7	
Cured product characteristics		
Reaction to fire, EN 13501-1 (Euroclass)	E	
Water vapour permeability, UNE-EN 1931, μ	1.830	
Resistance to wind loads, (kPa)	≥ 50	
Crack-bridging capability, NFT 30/703 (mm)		
- Curing for 7 days at 23 °C and 50 % R.H.	5,4	
- Curing for 3 days at 23 °C and 50 % R.H. and 4 days at -20 °C	8,9	
Adhesion on concrete ASTM D-4541 (MPa)	2,6 (Break of substrate)	
Tensile strength and elongation, EN-ISO 37/1994 (MPa / %)	3,1 / 852	
Water absorption at 24 / 144 h, UNE 53028 (%)	1,66 / 3,31	
Suitability for drinking water. 2002/72/CE	Approved	
Classification according to ETAG 005		
Working life / Climatic zones	W2 / M	
Imposed loads	P1 (Low) to P3 (Moderate)	
Roof slope	S1 (<5%) to S4 (>30%)	
Lowest / Highest surface temperature	TL3 (-20°C) / TH3 (80 °C)	
Consumptions*		
Consumption per coat, (kg/m ²)	Standard	ETAG 005
	0,6-0,9	0,8-0,9
Consumption per total application, (kg/m ²)	1,2-1,8	2,5-2,7

*These figures may vary depending on porosity, texture, substrate conditions and application method. A preliminary test on-site will determine the coverage exactly.

GUARANTEE

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. **DRIZORO®**, **S.A.U.** reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real data, a test on the jobsite must be done, and it will be carried out under the client responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.



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