



# MAXELASTIC® POLY

## SPRAYED POLY-UREA MEMBRANE FOR WATERPROOFING AND PROTECTION OF CONCRETE

### DESCRIPTION

**MAXELASTIC® POLY** is a two-component poly-urea of high reactivity, hot-applied-spray, suitable for waterproofing and protection of concrete.

Once applied, it provides a high performance continuous elastomeric membrane for waterproofing of roofs, terraces, bridge decks, underground structures, etc.

### APPLICATION FIELDS

- Waterproofing and protection of all types of roofs, green roofs, terraces, balconies, etc.
- Waterproofing of bridge decks, parking decks, etc.
- Protection of polyurethane foam insulation.
- Waterproofing of channels, reservoirs, wastewater treatment plants and other water retaining structures, etc.
- Protective coating on drainage boxes, retaining tanks or areas exposed to spillages and spattering of chemical compounds

### ADVANTAGES

- Forms a seamless continuous membrane.
- Very good chemical resistance to water, seawater, wastewater, fuels, grease and oils, de-icing salts, diluted alkali and acid solutions, etc.
- Very good elasticity, tear strength and abrasion resistance.
- High yields by spraying means.

### APPLICATION INSTRUCTIONS

#### Surface preparation

Surface to be coated must be structurally sound, firm, without cement laitance, etc. It must be dry, clean and free of paints, coatings, efflorescence, loose particles, grease, oils, curing agents, form release agents, dust, gypsum, organic growth or any other contaminants that may affect to adhesion. Surface moisture content should not exceed 5 %.

For cleaning substrate, preferably in case of the smooth and/or poorly absorbent substrates, use sand blasting or high pressure water cleaning methods, not being desirable aggressive mechanical means.

Before applying **MAXELASTIC® POLY** all voids, holes, honeycombs, cavities, cold joints, tie holes, and static cracks without movement, once opened and routed to a minimum depth of 2 cm, must be repaired with the **MAXREST®** (Technical Bulletin No. 2). Rebars and other metal elements exposed during the substrate preparation should be cleaned and passivated with **MAXREST® PASSIVE** (Technical Bulletin No. 12), while non-structural and surface iron elements must be cut to a depth of at least 2 cm and then covered with a suitable repair mortar.

Expansion joints or cracks subject to movements once opened up and clean, should be treated with a suitable elastomeric sealant from **MAXFLEX®** range.

Prime and seal the porosity of the substrate with solvent-free epoxy primer **MAXEPOX® PRIMER** or water-based epoxy primer **MAXEPOX® PRIMER-W** with a coat of 0,2 to 0,3 kg/m<sup>2</sup> depending on substrate porosity. Very porous substrates may require additional coats to get a perfectly sealed surface and close porosity. Primer must be perfectly dry, between 24-48 hours depending on temperature conditions, before applying **MAXELASTIC® POLY**.

#### Application

**MAXELASTIC® POLY** is supplied ready to use by suitable spraying means. Apply two coats in perpendicular direction with a recommended thickness of about 1,0 mm, i.e. 2,0 mm per total application. Observe a waiting time of about 5 minutes between coats to avoid an excessive heat accumulation by its exothermic curing.

It is recommended the first coat to be applied with the minimum possible consumption, to check and detect previously any possible problem with substrate humidity or an insufficient sealing of concrete surface, which may leads to pinholes or blisters on the coating. Once checked, apply the remainder coat with its usual consumption.

For outdoor applications exposed to UV-rays, once **MAXELASTIC® POLY** has cured 24 hours at 20 °C, apply as UV-barrier topcoat, one or two coats of aliphatic polyurea **MAXELASTIC® POLY -F** or the aliphatic polyurethanes **MAXELASTIC® PUR -E**, **MAXELASTIC® PUR -F** or **MAXURETHANE® 2C** depending on type of traffic expected.

## Application conditions

Temperature range of substrate and ambient for application is from 10 °C to 40 °C. Do not apply with substrate and ambient temperature is at or below 10 °C, or when such temperatures are expected to fall below 10 °C within the 24 hours after application. Do not apply to frozen or frost-covered surfaces.

Ambient and surface temperature must be at least 3 °C higher than dew point. Do not apply with R.H. higher than 85 %. Measure the relative humidity and dew point before applying the product for applications carried out in proximities of marine environment.

## CONSUMPTION

Estimated consumption for **MAXELASTIC® POLY** is 1,0 kg/m<sup>2</sup> per coat with an average thickness of about 1 mm per coat, i.e. a total consumption of 2,0 kg/m<sup>2</sup> and 2 mm thickness approximately, applied in two coats.

These figures are for guidance and may vary depending on porosity, texture, substrate conditions and application method. Perform a preliminary test on-site to ascertain the total consumption exactly.

## IMPORTANT INDICATIONS

Surface moisture content must be below 5 %. Allow substrate to dry enough after rain, water contact,

damp, dew, condensation, etc, as well as after washing surface.

For other uses not specified on this Technical Bulletin or further additional, consult the Technical Department.

## PACKAGING

**MAXELASTIC® POLY** is supplied in pre-weighed two-component sets of 400 kg. Component A and B in 200 kg drum. It is available in grey colour.

## STORAGE

Three months in its unopened and undamaged original sealed packaging. Store in a cool, dry and covered place, protected from moisture, frost and direct sunlight, with temperatures between 5 °C and 35 °C. Storage at temperatures above 35 °C may lead to an increase of viscosity.

## SAFETY AND HEALTH

**MAXELASTIC® POLY** is not a toxic product but direct contact with skin and eyes must be avoided. Use proper clothes, rubber gloves and safety goggles during application. In case of skin contact, wash affected area with soap and water. In case of eye contact, rinse immediately thoroughly with clean water but do not rub. If the irritation persists, seek medical assistance.

Consult the Material Safety Data Sheet for **MAXELASTIC® POLY**.

Disposal of the product and its packaging should be carried out according to the current official regulations and it is the responsibility of the final user of the product.

## TECHNICAL DATA

Product characteristics		
	Component A	Component B
Density, (g/cm <sup>3</sup> )	1,0	1,1
Viscosity, (mPa·s)	220	800
Mixing ratio for A:B by weight (kg:kg) / by volume (l:l)	100:112 / 100:100	
Application and curing conditions		
Temperature / Relative Humidity for substrate and ambient, (°C / %)	10-40 / <85	
Drying time to touch at 20 °C, (s)	4 – 6	
Waiting time between coats at 20 °C, (min)	>5	
Working temperature/pressure for spraying means, (°C / Bar)	70 – 80 / 150-170	
Cured product characteristics		
Density, EN ISO 845 (g/cm <sup>3</sup> )	1,0	
Tensile strength at 100% / 300% of elongation, (N/mm <sup>2</sup> )	12,4 / 15,2	
Tensile strength at break, DIN 53 504 S-2 (N/mm <sup>2</sup> )	21	
Elongation at break, DIN 53 504 S-2 (%)	450	
Flexural strength at 5% / 10% of deflection , DIN ASTM D790	6,3 / 6,9	
Tear strength, DIN 53 5115 (N/mm)	58	
Adhesion on concrete with primer / steel without primer, (N/mm <sup>2</sup> )	2,5 / 6,5	
Abrasion resistance, DIN 53 516 (mg)	140	
Hardness, DIN 53 505 (Shore A / Shore D)	92-95 / 40-46	
Permeability to methane, DIN 53 380 (cm <sup>3</sup> mm/(m) <sup>2</sup> 24h)	50	
Thickness / Consumption*		
Consumption per coat / total application, (kg/m <sup>2</sup> )	1,0 / 2,0	
Thickness per coat / total application, (mm)	1,0 / 2,0	

\* These figures are for guidance only and may vary depending on porosity, texture, substrate conditions and application method. Perform a preliminary test on-site to ascertain the total consumption 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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ES045396-1/ES0458397-1