DRIZORO® Construction Products

MAXELASTIC® POLY-600

SPRAYED POLYUREA MEMBRANE WITH HIGH ELONGATION FOR WATERPROOFING AND PROTECTION OF CONCRETE

DESCRIPTION

MAXELASTIC® POLY-600 is a hot-applied-spray, two-component, solvent-free, pure poly-urea of high reactivity, suitable for waterproofing and protection of concrete.

Once applied, it provides a high performance continuous elastomeric membrane with high elongation 600% for waterproofing 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, foundations, retaining walls, etc.
- Protection of polyurethane foam insulation.
- Waterproofing of channels, reservoirs, wastewater treatment plants and other water retaining structures, etc.
- Protection of thermal insulation foams based on polyurethane or polystyrene.
- 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.
- Solvent-free, non-flammable, environmentally friendly.

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.

Concrete and cement-based substrates
The substrate must be solid and in good condition, with no loose or loose surfaces, surface grout, and as uniform as possible. The concrete tensile strength of the substrate must exceed 1.5 N/mm² (measured by pull-off test). It is recommended to achieve a surface preparation profile between CSP 4 and CSP 6, according to the criteria of the *International Concrete Repair Institute (ICRI).*

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 ***MAXREST®***. Rebars and other metal elements exposed during the substrate preparation should be cleaned and passivated with ***MAXREST® PASSIVE***, while non-structural and surface iron elements must be cut to a depth of at least 2 cm and then covered with ***MAXREST®***.

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

Prime and seal the porosity of the concrete substrate with ***MAXEPOX® PRIMER-W, MAXURETHANE® PRIMER*** or ***MAXELASTIC® POLY PRIMER***. 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 product and temperature conditions.

Metal substrates
On metal surface use as primers ***MAXEPOX® PRIMER -W*** or ***MAXEPOX® AC***.

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Primer must be perfectly dry, between 24-48 hours depending on temperature conditions.

Application

MAXELASTIC® POLY-600 is supplied ready to use by suitable hot-spraying means. Thus, the working temperatures for component A (Isocyanate -red drum-) and component B (Amine -blue drum-) are 80°C and 75°C, respectively. Additionally, the hoses must have a working temperature of at least 75°C. When opening the drums, stir slightly mechanically the component B for a homogeneous mixture of the components

Apply until the total required thickness, from 1,0 to 1,5 mm, in two or more continuous coats once the previous coat has dried (5 minutes approx.). 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 primer sealing of concrete surface, which may lead to pinholes or blisters on the coating. Once checked, apply next coats until desired thickness.

For outdoor applications exposed to UV-rays, once ***MAXELASTIC® POLY-600*** 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 ***MAXURETHANE® 2C, MAXELASTIC® PUR-E*** or ***MAXELASTIC® PUR-F*** depending on type of traffic expected or the slip resistance desired.

Application conditions

Substrate and ambient application temperature 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 24 hours after application. Do not apply to frozen or frost-covered surfaces.

Substrate and ambient 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.

Curing

Allow a minimum curing time of 12 hours at 20 °C and 50% R.H. before putting into service, performance of flooding tests or covering with tile mortars. Lower temperature or higher R.H. increase the curing time.

CONSUMPTION

Estimated total consumption for ***MAXELASTIC® POLY-600*** is 1,0-1,5 kg/m^2 with an approximate average thickness of 1,0-1,5 mm, respectively.

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.
- Do not apply on substrates subject to negative hydrostatic pressure.
- When applied on concrete surfaces, the tensile strength of the substrate must exceed 1.5 N/mm² (measured by pull-off test).
- For other uses not specified on this Technical Bulletin or further additional, consult our Technical Department.

PACKAGING

MAXELASTIC® POLY-600 is supplied in pre-weighed two-component sets of 430 kg. Component “A” in a 225 kg drum and component “B” in a 205 kg drum. It is supplied in standard grey colour.

STORAGE

Twelve 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-600 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 rib. If the irritation persists, seek medical assistance.

Consult the Material Safety Data Sheet for ***MAXELASTIC® POLY-600***.

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.

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TECHNICAL DATA

Product characteristics		
	Component A (Isocyanate) Red drum	Component B (Amine) Blue drum
Density, (g/cm^3)	1,10 ± 0,1	1,05 ± 0,1
Viscosity, UNE-EN ISO 2555, (cP)	1.000	700
Solid content, (%)	100	
Mixing ratio, A:B by weight (kg:kg) / by volume (l:l)	1:1 / 1,10:1,05	
Application and curing conditions		
Temperature / Relative Humidity for substrate and ambient, (°C/%)	10-40 / <85	
Drying time to touch at 20°C, (s)	10 – 30	
Waiting time between coats at 20°C, (min)	>5	
Working temperature/pressure for spraying means	Component A: 80°C Component B: 75°C 75°C / 210 bar	
Cured product characteristics		
Density, (g/cm^3)	1,08± 0,1	
Tensile strength at break, UNE-EN ISO 527-3 (MPa)	13	
Elongation at break, ISO 527 (%)	600	
Adhesion on concrete with primer / steel without primer, (N/mm^2)	2,5 / 6,5	
Abrasion resistance, UNE-EN ISO 5470-1 (mg)	133	
Hardness, DIN 53 505 (Shore A)	>75	
Emission of dangerous substances	No VOC, no solvent	
Thickness / Consumption*		
Minimum/ maximum total thickness applied, (mm) Total consumption application (kg/m^2)	1,0 - 1,5 1,0 - 1,5	

* 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.

Resistance to severe chemical attack UNE-EN 13529:2005		
Class I: 3 days non-pressure	Initial Shore A	Final Shore A
H_2SO_4 , 20%	75	73
Oil motor		41
Sodium Chloride, NaCl , 20%		74
Bleach		69
NaOH at 20%		71
Diesel oil		73

GUARANTEE

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