



MAXELASTIC®

POLY-EXP

SPRAYED AND EXPANDABLE PURE POLYUREA MEMBRANE FOR WATERPROOFING AND THERMAL INSULATION

DESCRIPTION

MAXELASTIC® POLY-EXP is a hot applied, two-component, highly reactive 100% solids pure polyurea for waterproofing, thermal insulation and concrete protection.

Once applied, leads a continuous membrane, without joints and overlaps, which expands from 5 to 7 times its original thickness.

APPLICATION FIELDS

- Waterproofing and thermal insulation of roofs, terraces, balconies, etc. on concrete or metal substrates.
- Encapsulation and thermal insulation of fibre cement roofs and surfaces.
- Waterproofing and thermal insulation of retaining walls and foundations.

ADVANTAGES

- Continuous membrane, without joints or overlaps.
- Very good chemical resistance against de-icing salts, oils, fats, fuels, etc.
- High versatility: fits over any surface and geometry. Especially suitable for its application over uneven areas with curved or squared shapes.
- Very good adhesion on cement mortars, concrete, fiber cement surfaces and metal substrates.
- 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.

Cement mortar and concrete substrates

Substrate must be solid and healthy, without unsound particles and as uniform as possible. All voids, cracks and static fissures, will be repaired with the **MAXREST®** structural repair mortar. Exposed reinforcement rebars must be cleaned and passivated with **MAXREST® PASSIVE**.

Expansion joints and fissures subjected to movements, once properly prepared will be treated with a proper **MAXFLEX®** range sealant.

Substrate porosity must be sealed by a priming coating of **MAXEPOX® PRIMER**, **MAXEPOX® PRIMER -W**, **MAXURETHANE® PRIMER** o **MAXELASTIC® POLY PRIMER** with an estimated consumption of 0,25-0,30 kg/m². Highly porous substrates may require additional coats until the complete sealing of the substrate. Priming coating must be completely dry before the application of the coating. It will occurs depending of environmental temperature and humidity after 24-48 hours.

Metal substrates

Prime with an estimated consumption of 0,25-0,30 kg/m² per coat with **MAXEPOX® AC** or **MAXEPOX® PRIMER -W**. Priming coating must be completely dry before the application of the coating. It will occurs depending of environmental temperature and humidity after 24-48 hours.

Application

MAXELASTIC® POLY-EXP is supplied ready to use by suitable spraying means. Apply one homogeneous coat with an estimated thickness of 2,0 mm, with a consumption of 2,0 kg/m². If additional coats are required, observe a minimum curing time for each coat of 30 minutes in order to avoid the overheating of the material. Expansive properties of the material allow it to expand from 5 to 7 times its original thickness, with a reaction time of

3-5 seconds and reaching its 90% properties performance after the first 24 hours

For outdoor applications, i.e. exposed to UV-rays, once **MAXELASTIC® POLY -EXP** has cured 24 hours at 20°C, apply as UV-barrier topcoat, one or two coats of aliphatic polyurea **MAXELASTIC® POLY -F**. As an alternative solution, as UV protection apply one or two coats of an aliphatic polyurethane as **MAXELASTIC® PUR-E**, **MAXELASTIC® PUR-F**, **MAXELASTIC® PUR-EW** or **MAXURETHANE® 2C**.

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 **MAXELASTIC® POLY -EXP** when relative humidity value exceeds 85%. Do not apply to frozen or frost-covered surfaces.

Substrate and ambient temperature must be at least 3°C higher than dew point. Measure the relative humidity and dew point before applying the product for applications carried out in proximities of marine environment.

Curing

Observe a minimum curing time of 72 hours at 20°C and 50% R.H. before the exposition of **MAXELASTIC® POLY -EXP** to permanent immersion conditions, its covering with gravels or grounds and its putting in service. For flooding test of the coating, observe a minimum curing time of 24 hours. Lower temperatures or higher H.R. will increase the curing time and the putting in service of the product.

CONSUMPTION

Estimated consumption of **MAXELASTIC® POLY -EXP** is 2,0 kg/m² per coat, for an average expanded thickness of approximately 10 mm.

This consumption may vary depending of substrate porosity, conditions of the substrate and application method. Perform a preliminary test on site in order to ascertain the exact consumption.

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 information, consult the Technical Department.

PACKAGING

MAXELASTIC® POLY -EXP is supplied in pre-weighed sets of 450 kg. Components A & B in 225 kg cans. Available in black colour.

STORAGE

Twelve months in its unopened and undamaged original sealed packaging. Store in a cold, 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 -EXP 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 -EXP**.

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 ³)	1,11 ± 0,1	1,09 ± 0,1
Solids content, (%)	100	
Mixing ratio, A:B by weight (kg:kg) / by volume (l:l)	100:102 / 100:100	
Application and curing conditions		
Substrate and environmental temperature / Humidity (°C / %)	10-40 / <85	
Reaction time – tack free time at 20°C, (s)	3 -5	
Curing time at 20°C, (h)	24	
Waiting time between coats at 20°C, (min)	>5	
Application temperature / pressure, (°C / Bar)	70-75 / 180-200	
Cured product characteristics		
Tensile strength to break, UNE-EN ISO 527-3, (MPa)	2,0	
Elongation at break, ISO 527, (%)	180	
Adhesion to concrete, (N/mm ²)	2,0	
Shore Hardness A, DIN 53 505	>50	
Thermal conductivity, EN 12667:2002, (W/mK)	0,081	
Thermal resistance at 1 cm thickness, EN 12667:2002, (m ² K/W)	0,1235	
Water-tightness, EN 1928:2000 Method A	Watertight - PASS	
Reaction to fire	Euroclass F	
Thickness / Consumption*		
Liquid applied thickness / cure applied thickness (mm)	2,0 / 10,0	
Consumption per total application, (kg/m ²)	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 exceeding the value of the purchased product. The shown data about consumptions, measurement and yields are for guidance only and are 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 executed, 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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