MAXURETHANE® FLEX

SOLVENT-FREE FLEXIBLE POLYURETHANE MEMBRANE FOR WATERPROOFING AND PROTECTION OF CONCRETE

CE

DESCRIPTION

MAXURETHANE® FLEX is a two-component, solvent-free, flexible and waterproof polyurethane membrane suitable for long-term protection of concrete and metal substrates.

APPLICATION FIELDS

- Waterproofing and protection of drinking water reservoirs.
- Waterproofing of swimming-pools, fountains, water channels, pipelines, etc.
- Waterproofing and chemical protection of waste water treatment plants, digesters, chemical reservoirs, etc.
- External waterproofing and protection of foundations, retaining walls, underground structures, etc.
- Waterproofing of terraces and balconies under ceramic pavement.
- Waterproofing of wet areas such as bathrooms, kitchens, rest-rooms, etc.
- Waterproofing of jardinières and areas exposed to roots.

ADVANTAGES

- Non-toxic, suitable for contact with potable water
  .
- Full flexibility and good elasticity, withstands thermal movements and vibrations of the substrate.
- Bridging, sealing and filling permanently of hairline cracks subject to movements.
- Forms a continuous waterproofing membrane without joints or connections, fitting to the geometry of substrate.
- Very good chemical resistance against sewage, marine water, oils, petrols, both acid and alkalies diluted, etc.
- Very good adhesion on concrete and metal surfaces.
- High wear and abrasion resistance.
- Solvent-free and non-flammable, suitable for poor ventilated working areas.

APPLICATION INSTRUCTIONS

Surface preparation

Surface must be sound, completely dry and clean, free from dirt, remains of paints, gypsum, efflorescence, greases, oils, as well as de-moulding agents, curing agents or any existing coating which could affect the adhesion. Remove any unbounded material from substrate. Surface damages such as defects, cavities, honeycombs, peelings should be repaired and levelled with the structural repair mortar ***MAXREST***® (Technical Bulletin n° 2). Wall/floor joints and wall/wall joints must be sealed properly as concave corners with ***MAXREST***® or ***MAXPLUG***® (Technical Bulletin n° 4).

Prior to application the surface moisture content must not exceed 5 %. Allow 28 days curing time for new concrete and mortar before application. Do not apply on substrates subject to negative hydrostatic pressure.
All steel surfaces must be dry and degreased, free of dust. Clean any rust preferably by dry sandblasting or shotblasting. Reinforcements must be cleaned of rust and scale and then, coated with the oxide converter and anti-corrosive protection ***MAXREST***® ***PASSIVE*** (Technical Bulletin n° 12).

Applications on porous substrates, prime surface with 0,2 - 0,3 kg/m^2 of ***MAXEPOX***® ***PRIMER*** (Technical Bulletin n° 174). Wait until primer is fully dry to touch, 12 - 24 hours approximately, before applying ***MAXURETHANE***® ***FLEX***.

Mixing

MAXURETHANE® ***FLEX*** is supplied in pre-weighed sets. The hardener, component B, is fully poured into the resin, component A. To make sure the proper full reaction between the two components, scrape the sides and bottom of both packaging to ensure complete mixing
.
The mixture can be done manually or better using a low speed drill (300 - 400 r.p.m. maximum), until achieving a homogeneous product in colour and appearance. Avoid producing too much air while mixing the product. Pot life for application is only 20 - 30 minutes at 20ºC, apply immediately after mixing.

Application

MAXURETHANE® ***FLEX*** can be applied by brush, roller or airless spray. Apply homogeneously in two perpendicular coats with a coverage of 0,3 – 0,4 kg/ m^2 per coat, to achieve a total consumption of 0,6 – 0,8 kg/ m^2. Allow first coat to dry between 6 and 12 hours depending on environmental and ventilation conditions. For vertical surfaces, apply in three coats achieving the same total consumption.

On wall/slab joints, cracks, concrete joints and other critical points subject to movements, a first coat with 0,3 kg/ m^2 of ***MAXURETHANE***® ***FLEX*** will be applied and then, the glass fibre veil ***DRIZORO*** ® ***VEIL G-45*** of 6 – 8 cm wide will be spread and completely embedded on this fresh coat. Once it dries, apply a second coat of ***MAXURETHANE***® ***FLEX*** with 0,3 kg/ m^2.

Application conditions

Do not apply below 5 ºC or when such temperatures are expected within 24 hours. Do not apply on frozen surfaces. Do not apply above 85% of relative humidity. Surface and ambient temperature must be at least 3 ºC 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.

Curing

Allow a minimum curing time of 7 days 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.

Cleaning

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

CONSUMPTION

Total coverage is estimated between 0,6 – 0,8 kg/ m^2, applied in two or three coats. Consumption may vary depending on porosity, surface conditions and application method. A preliminary test on-site will determine consumption exactly

IMPORTANT INDICATIONS

- Prior to application the surface moisture content must not exceed 5 %. Allow enough time for substrate to dry after rain, dew or other inclement weather and after cleaning surface.
- Before application allow 28 days curing time on new concrete and mortar.
- Do not apply on substrates subject to negative hydrostatic pressure.
- Do not add non-specified solvents or other compounds to ***MAXURETHANE® FLEX***.
- In case of outdoor use, once ***MAXURETHANE® FLEX*** has cured 24 hours, protect from UV-rays with one or two coats of ***MAXURETHANE® 2C*** (Technical Bulletin n° 87).
- For other use not specified in this Technical Bulletin or further information, consult our Technical Department.

PACKAGING

MAXURETHANE® FLEX is supplied in pre-weighed 25 kg set. It is available in grey, white, green and red colour.

STORAGE

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

SAFETY AND HEALTH

MAXURETHANE® FLEX is a non-toxic product but 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. Request Safety Data Sheet of ***MAXURETHANE® FLEX*** for further information.

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

TECHNICAL DATA

Product characteristics	
CE Marking, EN 1504-2 **Description. Polyurethane coating for protection against ingress of water and CO_2. Coating (C).** **Principles / Methods. Protection against ingress with coating (Principle 1-PI / 1.3), Moisture control with coating (Principle 2-MC / 2.2)**	
Coating color	Green, red, white and grey color
Density A+B (kg/l)	1,25 ± 0,1
Solids content A + B (%)	100
Ratio components A:B	4:1
Application temperature (ºC)	> 5
Pot-life at 20ºC (min)	20 – 30
Dry to touch, 20 ºC (hours)	6 - 12
Final curing time, 20 ºC (days)	7
Adhesion on concrete (MPa), EN-1542	3,4
Tensile strength (MPa), ASTM D-412	14,7
Elongation at break (%), ASTM D-412	84
Anti-carbonation barrier, S_d (m) EN-1062/6	94
Liquid water permeability, W (kg/m^2. h^{0,5}) EN-1062-3	< 0,01 Low permeability, Class III, W_3
Water vapor transmission rate (v) UNE EN-SIO 7783-1:1999; g/m^{2}day (Sd = 2,3)	Low transmission, Class III
Methane permeability ISO 15105-1 ml CH_4 / (m^2 day)	31,3
Ozone resistance UNE EN-ISO 1431-1	No cracks observed
Flash point	Non-flammable
Suitability for contact with potable water, European Directive 98/83/CE and 2007/19/CE	Approved
Consumption* per coat/ total consumption (kg/m^2)	0,3 – 0,4 / 0,6 – 0,8

*Consumption may vary depending on porosity, surface conditions and application method. A preliminary test on-site will determine consumption exactly.

Group of chemical compound	**Liquid used for testing**	**Results after 28 days as reduction in shore hardness (%).***
1.Gasoline	**47,5% Toluene 30,4 % Iso-octane 17,1% n-heptano 3%Metanol 2% Butanol**	**5**
9. Aqueous organic acids up to 10%.	**Acetic acid (10%)**	**6**
10. Inorganic acids up to 20%, and hydrolyzing acid salts in aqueous solution (pH<6) except acid and oxidant acids and their salts.	**Sulphuric acid (20%)**	**8**
11. Inorganic bases, and their hydrolyzing alkalis salts in aqueous solution (pH>8) except ammonium solutions and oxidant salts.	**Sodium Hydroxide (20%)**	**5**

*Shore hardness reduction should be <50% to meet requirements.

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. The data is 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 to 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.

DRIZORO, S.A.U.
C/ Primavera 50-52 Parque Industrial Las Monjas
28850 TORREJON DE ARDOZ – MADRID (SPAIN)
Tel. (+34) 91 676 66 76 - (+34) 91 677 61 75 Fax. (+34) 91 675 78 13
e-mail: info@drizoro.com Web site: drizoro.com