



MAXURETHANE[®] TOP



TRANSPARENT POLYURETHANE PROTECTIVE COATING FOR CONCRETE AND MASONRY IN OUTDOOR USES

DESCRIPTION

MAXURETHANE[®] TOP is a one-component coating based on flexible, transparent, air-cured synthetic aliphatic polyurethane resins. Once cured, it provides a protective coating with glossy or matt finish and high resistance against weathering for protection of concrete and masonry surfaces.

In case a colour finish is needed, **MAXURETHANE[®] TOP** can be mixed with the pigment paste **MAXURETHANE[®] DECOR** (Technical Bulletin no. 58).

Meets the requirements of European Standard EN 1504-2; Surface protection systems for concrete.

icing salts, salt solutions, diluted alkali and acid solutions.

- Provides an anti-dust finish for easy cleaning and maintenance of the surface coated.
- Quick drying.
- Can be applied as a non-slip floor finish.
- Excellent UV resistance. It does not yellow applied outdoor.
- High durability and ageing.
- Flexible, withstands substrate movements.
- Designed for both vertical and horizontal applications.
- Easy and ready to use product: applied manually by brush, roller, or mechanically by air-less spray equipments.

APPLICATION FIELDS

- Transparent/Pigmented protective coating against abrasion suitable on concrete floors, tiles and ceramic pavements in sport centers, industrial facilities, warehouses, underground car parks, terraces, balconies, etc.
- Protective coating for architectural concrete and façades against weathering and aggressive environment such as acid rain, freeze/thaw cycles, marine environment, etc...
- Multilayer systems for wet processing areas, stairs, ramps, loading docks, cold storage, maintenance areas, etc..
- Protection and finish on supports of wood, metal and ceramic tiles in general.
- Chemical protective coating of concrete structures in cooling towers, industrial plants, warehouses, etc.

ADVANTAGES

- Excellent abrasion resistance against road traffic and machinery.
- Very good chemical resistance to water, seawater, wastewater, grease and oils, de-

APPLICATION INSTRUCTION

Surface preparation

Surface must be structurally sound, firm, without cement laitance and as uniform as possible, and preferably with a slight roughness, i.e. open textured surface. It must be clean and free of paints, coatings, efflorescence, loose particles, grease, oils, curing agents, form release agents, dust, gypsum plasters, organic growth or any other contaminants that may affect to adhesion. Surface moisture content should not exceed 5%. Do not apply on substrates subject to rising damp or negative water pressure.

For cleaning and preparing the substrate, preferably in case of the smooth and/or poorly absorbent concrete and cement mortars, provide a mechanical texturing by abrasive disc, dry sand-blasting, scarification or other abrasive method to achieve at least a slightly textured surface, not being desirable aggressive mechanical or chemicals means. Finally, vacuum the dust and loose particles.

All small voids, holes, honeycombs, cavities, once opened must be patched with the epoxy-cement

mortar **MAXEPOX® CEM** (Technical Bulletin No. 197) or the epoxy-based mortar **MAXEPOX® JOINT** (Technical Bulletin No. 237). Static cracks without movement, once opened and routed to a minimum depth of 2 cm, must be repaired with **MAXREST®** (Technical Bulletin No. 2) to provide an even surface.

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 and fissures/cracks subject to movements, once opened must be sealed with a suitable sealant of **MAXFLEX®** range.

Mixing

MAXURETHANE® TOP is supplied ready to use. In case of coloured finish, use the pigment paste **MAXURETHANE® DECOR** (Technical Bulletin No. 58) in the desired colour.

Application

Apply by using a brush or roller resistant to solvents. If using an air-less spray equipment, dilute with the minimum amount of **MAXSOLVENT®** that allows its spray application.

Priming on concrete and porous substrates:

Apply a first coat of **MAXURETHANE® TOP** diluted with 50% of **MAXSOLVENT®** with a consumption of about 0,20 l/m², depending on porosity of substrate.

Priming on low or non-porous substrates:

On vitrified elements, marble, natural stone, porcelain, terrazzo, granite, metal, etc., apply the primer **MAXPRIMER® PUR** (Technical Bulletin No. 213) with a consumption from 0,10 - 0,15 l/m².

Once primer is dry, i.e., from 2 to 5 h for **MAXURETHANE® TOP** diluted with **MAXSOLVENT®**, and 1 hour for **MAXPRIMER® PUR** respectively, the surface is ready for the following coat.

Coating with smooth surface finish:

Once primer is dry, apply one or two pure coats of **MAXURETHANE® TOP** or **MAXURETHANE® TOP** mixed with the **MAXURETHANE® DECOR** pigment paste with a consumption from 0,20 - 0,25 l/m² per coat, depending of porosity substrate. Observe a drying time between applications from 2 to 5 hours at 20 °C.

Additional coats can be applied following the same interval time between coats. If this time does elapse before the following coat is applied or the surface has been in contact with water or other liquids, then lightly sand the surface before

proceeding with coats. Total recommended consumption for this application varies from 0,40 - 0,60 l/m².

Coating with non-slip surface finish (Slip/skid resistance value, Rd=3):

Once primer is dry, apply one pure coat of **MAXURETHANE® TOP** or **MAXURETHANE® TOP** mixed with the **MAXURETHANE® DECOR** pigment paste with a consumption from 0,20 - 0,25 l/m² per coat, depending of porosity substrate.

While this coat is still fresh, dust dry and clean silica sand **DRIZORO® SILICA 0308** (0,3-0,8 mm size) with a consumption from 1,0 - 1,5 kg/m². Once it is dry, i.e., at least 6 hours, depending on environmental and ventilation conditions, sweep and vacuum surface to remove unbounded and excess aggregate. Finally, apply a second coat of pure **MAXURETHANE® TOP** with a consumption from 0,20 - 0,25 l/m². Total recommended consumption for this application varies from 0,60 - 0,70 l/m².

Application conditions

Do not apply if rain, water contact, condensation, dampness or dew is expected the first 72 h after application.

Do not apply with substrate and/or ambient temperature is at or below 10 °C, or when are expected to fall below 10 °C within 24 h 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. lower than 30 % or higher than 80 %. Check the relative humidity and dew point before applying in proximities of marine environment.

Curing

Allow **MAXURETHANE® TOP** to cure 1 day for pedestrian traffic and 3 days for water immersion, flooding test or heavy traffic, at 20°C and 50% R.H. Applications at lower temperature, higher humidity and/or poor ventilation require longer curing time.

Cleaning

All equipments and tools must be cleaned immediately with **MAXSOLVENT®** after use. Once product cures, this can only be removed by mechanical means.

CONSUMPTION

Estimated consumption of **MAXURETHANE® TOP** is 0,20 l/m² as primer and, and 0,20 to 0,25 l/m² per successive coats.

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.

IMPORTANT INDICATIONS

- Do not apply on substrates subject to rising damp or negative water pressure.
- 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 of surface. If moisture is trapped behind the coating, a white film may be developed.
- Allow new concrete and cement mortars to cure 28 days before coating.
- Do not apply **MAXURETHANE® TOP** above 85% of relative humidity.
- Do not add solvents, thinners, or other non-specified compounds, and nor exceed the recommended mixing ratio when using **MAXSOLVENT®**.
- For other uses not specified on this Technical Bulletin or further information, consult the Technical Department.

PACKAGING

MAXURETHANE® TOP is supplied in 5 litre can and 25 litre drums. It is available in gloss or matt finish.

STORAGE

Twelve months in its unopened and undamaged original sealed packaging. Store in a cool, dry and covered place, protected from moisture, frost and away from direct exposure to sunlight, with temperatures between 5 °C and 30 °C. Storage at higher temperatures may result in an increase of viscosity.

SAFETY AND HEALTH

MAXURETHANE® TOP 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 rubber goggles and protective gloves should be used when handling, mixing and applying the product. In case of contact with skin, wash affected area with soap and water. In case of eye contact, rinse immediately thoroughly with clean water but do not rub. If irritation persists, seek medical assistance.

Consult the Material Safety Data Sheet for **MAXURETHANE® TOP**.

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	
CE Marking, EN 1504-2	
Description. Epoxi coating for protection of concrete. Coating (C). Principles / Methods. Protection against ingress with coating (Principle 1-PI / 1.3) and Moisture control with coating (Principle 2-MC / 2.2)	
General appearance	Transparent liquid
Density at 20 °C, (g/cm ³)	0,95 ± 0,1
Viscosity at 20 °C, (mPa·s)	50-200
Content in NCO, (% by weigh)	6,2
Application and curing conditions	
Minimum application temperature (°C)	>10
Waiting time between coats at 20 °C, (h)	2 – 5
Total curing time at 20 °C & 50% R.H.	
- Pedestrian traffic (d)	1
- Permanent immersion, flooding test or heavy traffic (d)	3
Cured product characteristics	
Permeability to water vapour, EN ISO 7783-1/-2. - Classification, S _D (m)	Class I: Permeable to water vapour < 5
Permeability to water and capillary absorption, EN 1062-3. w (kg/m ² ·h ^{0,5})	< 0,1
Permeability to CO ₂ , EN 1062-6. S _D (m)	> 50
Adhesion on concrete at 28 days, EN 1542 (MPa)	≥ 1,0
Adhesion on concrete, ASTM D-4541 (MPa)	> 2,0
Slip/skid resistance value, UNE-ENV 12633	Class 3
Consumption*	
Consumption	
- As priming, (l/m ²)	0,20
- Per coat/total application, (l/m ²)	0,20-0,25 / 0,40-0,50

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

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.



DRIZORO, S.A.U.

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

