



MAXURETHANE®



ONE-COMPONENT TRANSPARENT POLYURETHANE PROTECTIVE COATING HIGHLY RESISTANT TO CHEMICAL ATTACK AND ABRASION FOR INDOOR APPLICATIONS

DESCRIPTION

MAXURETHANE® is a one-component coating based on transparent, air-cured synthetic polyurethane resins with glossy finish. It is specially formulated for protection of indoor flooring and others surfaces against aggressive chemical attacks and abrasion, in industrial floors, reservoirs and food industry. It prevents dusting of concrete floors, stores and parking areas.

In case a colour finish is needed, **MAXURETHANE®** 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.

APPLICATION FIELDS

- Transparent/Pigmented protective coatings for protection against chemical attack and abrasion suitable for the food industry (meat, wine, beer, milk, fats, butter, etc...), pharmaceutical industry and/or chemical production sites in general, garages and underground car parks, laboratories, kitchens, etc.
- Chemical protection for the **MAXSEAL®** waterproofing coatings range in drinking water tanks and others reservoirs.
- Protective sealing for the **MAXEPOX®** epoxy-based systems or the **MAXELASTIC® PUR** waterproofing liquid membranes subject to abrasion.
- Transparent protection and anti-dust coating with high performance on concrete floors and pavement in malls, recreational areas, skating rinks, gymnasiums, sport centres, offices, exhibitions halls, etc.

- Multilayer systems for wet processing areas, stairs, ramps, loading docks, cold storage, maintenance areas, etc..
- Protective coating on drainage boxes, retaining tanks or areas exposed to spillages and spattering of chemical compounds: petrol, diesel, fuel oil, lubricating oils, diluted chemicals, etc.
- Protection and finish on supports of wood, metal and ceramic tiles in general.

ADVANTAGES

- Excellent abrasion resistance to road traffic and machinery.
- Very good chemical resistance to water, seawater, wastewater, grease and oils, de-icing salts, salt solutions, diluted alkali and acid solutions.
- Suitable for use in contact with drinking water.
- Excellent adhesion on concrete, cement mortars, epoxy or polyurethane-based resins.
- Provides a compact, continuous, uniform surface with anti-dust finish for easy cleaning and maintenance of the surface coated.
- High brightness and excellent finish: Enhances the colour and finish of the substrate.
- Quick drying.
- Can be applied as a non-slip floor finish by dusting of aggregates on top.
- Easy and ready to use product: applied manually by brush, roller, or mechanically by air-less spray equipments.

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® is supplied ready to use. In case of colour 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 used an air-less spray equipment, dilute with the minimum amount of **MAXSOLVENT®** that allows its application by spray.

Priming on concrete or porous substrates:

Apply a first coat of **MAXURETHANE®** diluted with 30% of **MAXSOLVENT®** with a consumption of 0,20 kg/m², depending on substrate porosity.

Priming on low or non-porous substrates:

On vitrified elements, marble, natural stone, porcelain, tiles, terrazzo, granite, metal, etc apply

the primer **MAXPRIMER® PUR** (Technical Bulletin No. 213) with a consumption of 0,10 to 0,15 l/m². Once primer is dry, i.e., from 1 to 4 h for **MAXURETHANE®** 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 two pure coats of **MAXURETHANE®** or **MAXURETHANE®** mixed with the **MAXURETHANE® DECOR**, with a consumption from 0,1 kg/m² per coat, depending on substrate porosity. Allow a drying time between coats of 2 to 4 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 next coats. Total recommended consumption for this application is from 0,40 to 0,50 kg/m².

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

Once primer is dry, apply one pure coat of **MAXURETHANE®** or **MAXURETHANE®** mixed with the **MAXURETHANE® DÉCOR**, with a consumption from 0,1 kg/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 to 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®** with a consumption from 0,20 to 0,25 kg/m². Total recommended consumption for this application is from 0,50 to 0,55 kg/m².

Application conditions

Do not apply when rain, water contact, condensation, dampness and dew is expected within the first 72 h after the 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 relative humidity and dew point before applying in proximities of marine environment.

Curing

Allow **MAXURETHANE®** to cure for at least 3 days at 20 °C and 50% R.H. before water immersion, flooding test or heavy traffic. Applications at lower temperatures, high humidity and/or poor ventilation require longer drying and curing times.

Cleaning

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

CONSUMPTION

Estimated consumption of **MAXURETHANE®** is 0,20 kg/m² as primer with 30% **MAXSOLVENT®** and from 0,1 kg/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

- For interior use only.
- Do not apply on substrates subject to rising damp or negative water pressure.
- Surface moisture content must be below 5 %. Allow enough time for drying the substrate after rain, contact with water, damp, dew, condensation, etc, as well as after washing surface. If moisture is trapped behind the polyurethane coating, a white film may be developed.
- Allow new concrete and cement mortars to cure 28 days before coating.
- Do not add solvents, thinners, additives, or other non-specified compounds, and not 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® is supplied in 5 kg can and 25 kg drum.

STORAGE

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

SAFETY AND HEALTH

MAXURETHANE® 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 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 irritation persists, seek medical assistance.

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

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. Polyurethane 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 and colour	Transparent /light yellowish liquid	
Density at 20 °C, (g/cm ³)	1,05 ± 0,1	
Flash point, (°C)	> 80	
Application and curing conditions		
Application temperature / Relative humidity, (°C / %)	Ambient 10-30 / 30-85	Substrate >10 / <5
Waiting time between coats at 20 °C, (h)	2 - 4	
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		
Appearance of dry film	Glossy transparent film	
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 steel / concrete, ASTM D-4541 (MPa)	2,05 / 2,85	
Abrasion resistance (Taber Index), ASTM D-4060 Wearing index (Abrading wheel: CS-10 & Load: 1,0 kg)	500 Cycles	1.000 Cycles
	0,0108	0,0140
Resistance to severe chemical attack, EN 13529 (Reduction in Shore hardness)	Class I: G-1 (2%), G-9 (3%), G-10 (3%), G-11 (2%) Class II: G-1 (3%), G-9 (5%), G-10 (5%), G-11 (3%)	
Slip/skid resistance value, UNE-ENV 12633 (Rd)	Class 3	
Suitability for contact with potable water, BS 6920	Suitable	
Suitability for contact with alcoholic, fats, acidic & water-based foods: 2000/72/CE	Suitable	
Consumption*		
Consumption		
- Primer diluted with 30% of MAXSOLVENT ®(kg/m ²)	0,20	
- Successive coats (kg/m ²)	0,10	

* 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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