



MAXURETHANE®

2C-W PHOTOACTIVE

PHOTOCATALYTIC AND DECONTAMINATING WATER-BASED POLYURETHANE COATING FOR INDOOR AND OUTDOOR USE



DESCRIPTION

MAXURETHANE® 2C-W PHOTOACTIVE is a photocatalytic, aliphatic, two-component water-based polyurethane coating, which once cured forms a protective film with high decontaminating and self-cleaning power, with high resistance to weathering and aging, providing finishes of great durability and colour stability outdoors.

APPLICATION FIELDS

- Coating of facades and exterior surfaces, developing photocatalytic and decontaminating properties with exposure to natural light.
- Coating of interior walls and roads in tunnels, to develop photocatalytic properties due to exposure to artificial ultraviolet light sources.
- Decorative finish and abrasion protection of concrete floors and pavements in car parks, industry, etc.
- Top-coating and protection on waterproofing membranes of roofs type **MAXELASTIC(R PUR -HW)**, exposed to intense pedestrian traffic.
- Protection and anti-stain finish for indoors and outdoors on concrete, mortar, stone, wood, tile, etc.

ADVANTAGES

- High decontaminating power because of photocatalysis. It drastically reduces and neutralizes the harmful effect caused by CO₂, NO_x, SO_x.
- Provides a self-cleaning surface, reducing cleaning and maintenance costs for treated surfaces.
- Water-based formula, without Volatile Organic Content (VOCs) in its composition.
- Antibacterial properties, eliminates environmental pathogens (viruses, bacteria, mold).
- Applicable on ceilings and walls, on interior and exterior surfaces.

- UV resistant, provides durability and colour stability.
- Long lasting, very resistant to temperature and weather changes.
- Excellent adhesion to the substrate, no special primers required.
- Highly resistant to abrasion and wear.

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 10 %. Do not apply on substrates subject to rising damp or negative water pressure.

Concrete and mortars:

Provide a mechanical texturing by abrasive disc, dry sandblasting, 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 once opened must be patched with a suitable mortar **MAXEPOX® CEM** (Technical Bulletin No. 197) or with 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. 27) to provide. Rebars 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 **MAXREST®**.

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

Metal surfaces:

Surfaces should be cleaned to remove all traces of corrosion, and must be degreased, dry and free of dust.

Mixing

MAXURETHANE® 2C-W PHOTOACTIVE is supplied as a pre-weighed two-component set. Premix the components separately, and then the hardener component B, is poured into the resin component A, ensuring is fully added. Mixing manually or preferably using a low-speed drill (300-400 rpm. maximum), fitted with a mixer suitable for liquids, for about 2-3 minutes until achieving a homogeneous product in colour and appearance.

Application

Apply by brush, roller or air-less spray. On porous substrate, apply a first thin coat of **MAXURETHANE® 2C-W PHOTOACTIVE** with a consumption of 0,10-0,15 kg/m², as priming.

Coating with smooth surface finish. Once primer is dry, apply two pure coats of **MAXURETHANE® 2C-W PHOTOACTIVE** with a consumption from 0,2 to 0,25 kg/m² per coat, and allow a drying time of 6 to 12 hours between coats, depending on temperature.

Additional coats can be applied following the same interval time between coats. Do not allow more than 24 hours 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 coat. Total recommended consumption of **MAXURETHANE® 2C-W PHOTOACTIVE** for this application is of 0,5-0,6 kg/m².

On vertical surfaces, apply in three or four coats to achieve the same total consumption.

Coating with anti-slippery surface finish. Once primer is dry, apply one coat of **MAXURETHANE® 2C-W PHOTOACTIVE** with a consumption of 0,20-0,25 kg/m² per coat. While this coat is still fresh, dust dry and clean silica sand **DRIZORO® SILICA** with a consumption from 1,0 to 1,5 kg/m². Also, coloured aggregates such as **MAXEPOX® COLOUR** can be used for aesthetic finishing. Once it is dry, sweep and vacuum surface to remove unbounded and excess sand. Finally, apply a second coat of **MAXURETHANE® 2C-W PHOTOACTIVE** with a consumption from 0,2 to 0,25 kg/m². Total recommended consumption of

MAXURETHANE® 2C-W PHOTOACTIVE for this application varies from 0,5 to 0,7 kg/m².

Application conditions

Do not apply when rain, water contact, condensation or dew is expected within 24 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. higher than 90 %. Check relative humidity and dew point before applying in proximities of marine environment. At temperatures above 30°C, protect application from direct sunlight.

With low temperatures, higher humidity levels or both, use dry and warm air to get the suitable conditions, such as with an electric powered air blower system. Consequently, and for the evaporation of water contained in the product, if hot air is used, it must come from a dry source (electricity). The hot air from the combustion of gas or oil produces a large amount of moisture that makes it difficult to drying of the coating.

Curing

Allow **MAXURETHANE® 2C-W** to cure for at least 1 day for pedestrian traffic, and 3 days at 20 °C and 50% R.H. for total curing. Applications at lower temperatures and/or high humidity require longer drying and curing times.

Cleaning

All mixing and application tools must be cleaned immediately with water, after use. Once product cures, this can only be removed by mechanical means.

CONSUMPTION

Estimated consumption of **MAXURETHANE® 2C-W PHOTOACTIVE** is 0,1-0,15 kg/m² as primer, and 0,20-0,25 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

- Do not apply on substrates subject to rising damp or negative water pressure. Allow substrate to dry enough after raining, water contact, damp, dew, condensation, etc, as well as after washing surface.
- Allow new concrete and cement mortars to cure 28 days before coating.
- Do not add solvents, thinners or other non-specified compounds.
- Use **DRIZORO SILICA** or **MAXEPOX COLOUR** completely dry.
- Observe the recommended consumptions per coat.
- For other uses not specified on this Technical Bulletin or further information, consult the Technical Department.

PACKAGING

MAXURETHANE® 2C-W PHOTOACTIVE is supplied in pre-weighed two-component set of 22,35 kg (22 kg for component A and 0,350 kg for Component B), and 5 kg (4,925 kg for component A and 0,075 kg for Component B). It is available only in white colour with matt finish.

STORAGE

Twelve months for both components, 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.

SAFETY AND HEALTH

MAXURETHANE® 2C -W PHOTOACTIVE is not a toxic product but direct contact with skin and eyes must be avoided. Use 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 **MAXURETHANE® 2C -W PHOTOACTIVE**.

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	
<i>CE Marking, EN 1504-2</i>	
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)	
A:B mixing ratio	100:1,5
Density for component A at 20 ±2°C, (g/cm ³)	1,14 ± 0,1
Density for component B at 20 ±2°C, (g/cm ³)	1,05 ± 0,1
Density for A+B at 20 ±2°C, (g/cm ³)	1,14 ± 0,1
Application and curing conditions	
Minimum application temperature/ Relative Humidity (°C / %)	>10 / < 90
Waiting time between coats at 20 °C and 50% R.H., (h)	6-12
Curing time for pedestrian traffic/Total curing at 20 °C & 50% R.H., (d)	1 / 3
Cured product characteristics	
Removal of NO _x UNE 127197-1. (Class / %)	Class 3 / 40,1
Permeability to CO ₂ , EN 1062-6.	
- Permeability to CO ₂ (g/m ² ·d)	4,9
- Equivalent diffusion air layer thickness S _d (m)	S _d < 50
- Diffusion resistance Index (μ)	237.888
Permeability to water vapour, EN ISO 7783-1/-2.	Class I: S _d < 5 m
- Classification	Permeable to water vapour
- Equivalent air layer thickness, S _D (m)	0,8
- Transmission rate, V (g/m ² .día)	27,4
- Resistance to vapour transmission coefficient: μ	3359
Permeability to water and capillary absorption, EN 1062-3. w (kg/m ² .h ^{0.5})	< 0,1
Adhesion on concrete at 28 days, EN 1542 (MPa)	> 2,0
Consumption*	
Primer coat, (kg/m ²)	0,10-0,15
Successive coats (kg/m ²)	0,20-0,25

* 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. 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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