



# MAXFLOOR® POLY

## COLD-APPLIED, ALIPHATIC POLYUREA COATING FOR CONCRETE FLOORS WITH VERY URGENT OPENING TO TRAFFIC

### DESCRIPTION

**MAXFLOOR® POLY** is a solvent-free, two-component, cold-applied aliphatic polyurea with high mechanical and chemical resistance properties, suitable for the protection and decorative finish of concrete pavements, when a very urgent opening to traffic is required (between 3 and 4 hours).

**MAXFLOOR® POLY** can be applied as a single topcoating for smooth finish. Also allows to be mixed with selected aggregate to obtain either multilayer anti-slippery coatings or a fluid mortar for leveling in small thicknesses. It is available in color and transparent version.

### APPLICATION FIELDS

- Continuous leveling coating with high mechanical, abrasion and chemical resistance properties, where a fast pedestrian/ wheel traffic time is required, in parking areas, warehouses, aircraft hangars, workshops, etc.
- Chemical and abrasion protection coatings on concrete floors where very quick hardening is required in food processing areas, pharmaceutical industries, chemical plants and other manufacturing units.
- High performance coating with excellent aesthetic decorative finish in malls, theme parks, offices, hotels, museums, showrooms, etc.
- Multilayer anti-slippery systems with selected aggregate: wet areas, stairs, access ramps, docks, cold storage units, parking slopes, maintenance areas, etc.
- Chemical protection coating to aggressive chemical compounds in storage tanks, loading areas or exposed to splits, emergency retaining tanks, etc

### ADVANTAGES

- Extremely fast traffic time: 3 hours pedestrian traffic and 4 hours wheel traffic. Minimize downtime and very quick opening to service.
- Allows a wide range of application methods: single layer smooth coating, anti-slippery multilayer systems, (in color or transparent finish), leveling mortar for small thickness, etc.
- Excellent adhesion on concrete, no specific bonding agents required.
- Excellent chemical resistance against chemical compounds such as oils, greases, diesel, diluted acids and alkalis, etc.

- Very high abrasion resistance to wheel traffic, forklifts, industrial vehicles, etc.
- Excellent weathering and UV-rays resistant. Suitable for outdoor/indoor use.
- Provides an outstanding compact, continuous and uniform anti-dust finish, with very easy cleaning and free-maintenance.
- Environmental friendly solution: Solvent-free, odor-less, suitable for indoor use and poor ventilated areas.

### APPLICATION

#### Substrate preparation

Substrate must be structurally sound, solid, without cement laitance and preferably with a slight roughness, i.e. open textured surface by sandblasting or scarifying. Minimum tensile strength for the substrate must exceed 1 MPa. Patching of defects and voids by square cutting concrete minimum 30 mm depth, can be done with fast-setting floor repair mortar **MAXROAD®**. For small cracks and featheredge repairs use the epoxy fine mortar **MAXEPOX JONT®**.

Surface must be clean, dry 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. Moisture surface must be below 5%.

Consult our technical note "*Preparation of concrete surfaces for application of coatings*" for further information.

With moisture substrate from 5 % to 10%, apply the water-based epoxy primer **MAXEPOX® PRIMER -W** with a consumption of 0,2-0,3 kg/m<sup>2</sup>. Before applying **MAXFLOOR® POLY** it is mandatory that **MAXEPOX® PRIMER -W** is tack-free and fully dry, which would take place within 12 - 24 hours (at 20 °C).

#### Mixing

**MAXFLOOR® POLY** is supplied as a pre-weighed two-component set. Firstly pre-mix the components separately, and then the hardener, component B, is poured into the resin, component A, mixing 2-3 minutes by a low speed drill (300-400 rpm. maximum) fitted with a mixer suitable for liquids, until achieving a homogeneous product in colour and appearance. Do not mix for prolonged period nor use high-speed mixer, which may heat the mixture or introduce air bubbles.

Check Technical Data Table for product pot life (10 minutes at 20° C). This value is greatly reduced with higher temperature application.

If a fluid leveler mortar is required, once components A+B are fully mixed, add the selected aggregate **DRIZORO® SILICA** or **MAXFLOOR® FILLER** with a ratio resin/aggregate of 1/0,7 and mix again.

## Application

On very porous substrates, previously apply a thin primer coat of **MAXFLOOR® POLY** with a consumption of 0,2 a 0,25 kg/m<sup>2</sup>. Allow a drying-time between 3 - 4 hours before proceeding with next coat. If the substrate is non-porous or low porosity surface, the application of a primer coat is not required.

### Smooth sealing topcoating:

Apply directly a single coat of **MAXFLOOR® POLY** by brush, roller, toothed trowel or squeegee with a consumption of 0,50 a 0,60 kg/m<sup>2</sup>, and immediately use a spiked roller to remove possible air bubbles on surface and easier leveling.

### Anti-slip broadcast multilayer system:

Apply a first pure coat of **MAXFLOOR® POLY** by brush, roller, toothed trowel or squeegee with a consumption of 0,40 kg/m<sup>2</sup>, and while it is still fresh, broadcast aggregate **DRIZORO® SILICA**, **DRIZORO® SILICA DECOR** or **MAXEPOX® COLOR**, depending on roughness desired, with an estimated coverage of 1,0-1,5 kg/m<sup>2</sup>. Once it is dry, i.e., after 3 - 4 hours, sweep and vacuum surface to remove excess of sand, and apply a second pure coat of **MAXFLOOR® POLY** as topcoat with an estimated consumption from 0,20 to 0,40 kg/m<sup>2</sup>, depending on aggregate size.

### Fluid mortar (1,0-2,0 mm thickness):

Primer on this case must be mandatory used. Once the primer is tack-free, apply by toothed trowel or squeegee the mixture composed of **MAXFLOOR® POLY** and **MAXEPOX® FILLER** in proportion 1:1-0,7, in thickness between 1,5 mm to 2 mm. After spreading the mix, use immediately a spiked roller to remove possible air bubbles on surface and easier leveling. Higher thickness per layer is allowed checking its suitability according to job-site conditions.

## Application conditions

Do not apply if rain, contact with water, condensation, dampness or dew is expected within the first 3-4 h after application.

Do not apply with substrate and/or ambient temperature is at or below 8 °C, or when are expected to fall below 8 °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.

With low temperatures, use dry and warm air in order to get suitable conditions, such as an electric powered air blower system.

Temperatures above 30 °C lead a quick-drying and heat production, so the pot life is greatly reduced.

## Opening to traffic

Allow **MAXFLOOR® POLY** to dry 3 hours for pedestrian traffic and 4 hours for wheel traffic, at 20 °C. Applications at lower temperature may require longer curing time.

## Cleaning

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

## CONSUMPTION

### *As primer on porous surfaces:*

Estimated consumption for **MAXFLOOR® POLY** varies from 0,2-0,25 kg/m<sup>2</sup> per coat.

### *Smooth sealing topcoating:*

Estimated consumption for **MAXFLOOR® POLY** varies from 0,50-0,60 kg/m<sup>2</sup> per coat.

### *Anti-slip broadcast multilayer system:*

Estimated consumption for **MAXFLOOR® POLY** varies from 0,6-0,8 kg/m<sup>2</sup> per coat and about 1,5-2,0 kg/m<sup>2</sup> for aggregates **DRIZORO® SILICA**, **DRIZORO® SILICA DECOR** or **MAXEPOX® COLOR**.

### *Fluid mortar:*

Estimated consumption for **MAXFLOOR® POLY** is 1,0 kg/m<sup>2</sup> per mm thickness and for **MAXFLOOR® FILLER** is 0,7 kg/m<sup>2</sup> per mm thickness.

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

- Surface moisture content must not exceed 5%. Do not apply on substrates subject to rising damp or negative water pressure.
- Allow new concrete and mortar to cure a minimum of 28 days before application
- Avoid contact with water, damp, dew, condensation, etc within 3-4 hours after application.
- Do not add solvents, thinners, additives or other non-specified compounds on the mix. Respect the recommended mixing ratio of components A + B.
- Selected aggregate must be thoroughly dry before mixing with resin components A+B.
- For other uses not specified on this Technical Bulletin or further information, consult the Technical Department.

## PACKAGING

**MAXFLOOR® POLY** is supplied in a pre-weighed two-component set of 10 kg. It is available in grey, white, red, green and transparent version. Other colours are available upon special request.

## 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 35 °C.

Storage at temperatures below 5 °C may lead the crystallisation of product components. Should this happen, it must be heated slowly at moderate temperature while it is regularly stirred until achieving its homogeneous and original lump-free appearance.

Storage at temperatures above 35 °C may lead an increase of viscosity of the liquid components.

## HEALTH AND SAFETY

**MAXFLOOR® POLY** 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 **MAXFLOOR® POLY**. 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.

<b>TABLE I.- RESISTANCE TO ACIDS</b>		
Chemical compound	Concentration (% by weight)	Result
Acetic, acid	2	+
	10	(+)
Acrylic, acid	2	+
	10	+
Hydrochloric, acid	10	+
	20	(+)
Citric, acid	5	+
Hydrofluoric, acid	2	+
Formic, acid	2	+
	10	(+)
Phosphoric, acid	15	+
	50	(+)
Lactic, acid	2	+
	10	+
Nitric, acid	15	+
	50	-
Sulphuric, acid	5	+
	50	-
Tannic, acid	5	+
Tartaric, acid	5	+

<b>TABLE II.- RESISTANCE TO SOLVENTS</b>		
Chemical Compound	Concentration (% by weight)	Result
Acetone	Pure	(+)
Dichloroethane	Pure	-
Ethylene glycol	Pure	(+)
Phenol	Pure	-
Formaldehyde	Pure	(+)
Glycerine	Pure	+
Methanol	Pure	(+)

<b>TABLE III.- RESISTANCE TO OILS, GREASES &amp; FUELS</b>		
Chemical Compound	Concentration (% by weight)	Result
Animal oil	Pure	+
Motor oil	Pure	+
Diesel oil	Pure	+
Petroleum	Pure	+
White-spirit	Pure	+

<b>TABLE IV.- RESISTANCE TO ALKALIS &amp; SALT SOLUTION</b>		
Chemical Compound	Concentration (% by weight)	Result
Ammonia, solution	10	+
Sodium hypochlorite	2	+
	20	+
Potassium hydroxide	20	+
Potassium permanganate	5	+
	10	+
Hydrogen peroxide	1	+
	10	+
Calcium sulphate	10	+
Potassium sulphate	10	+
Ammonium sulphate	10	+
Sodium hydroxide	10	+

Test results after 500 hours at 20 °C:  
 + Resistat  
 (+) Resistat Ocasionally  
 - Non-resistant

## TECHNICAL DATA

Product characteristics		
	Transparent version	Pigmented version
Appearance and color component A	Transparent homogeneous paste	Coloured homogeneous paste
Appearance and color component B	Translucent-yellowish liquid	
Density A+B (g/cm <sup>3</sup> )	1.30± 0,1	1.12± 0,1
Mixing ratio A:B (weight)	1,1:1,0	2:1
Mixing ratio A+B: <b>MAXFLOOR® FILLER</b> as fluid mortar (weight)	1:0,7	
Application and curing conditions		
Application temperature conditions (°C/)	8 – 35	
Open time 10 °C/ 20 °C/ 30 °C (min)	15 / 10 / 5	
Time between coats, 20 °C (hours)	3 - 4	
Time for opening to traffic, 20 °C (hours)		
- Pedestrian traffic	3	
- Wheel traffic	4	
Consumption / thickness		
<i>Smooth sealing topcoating</i>		
- Per coat (kg/m <sup>2</sup> )	0,5 - 0,6	
<i>Anti-slip broadcast multilayer system:</i>		
- Resin consumption (kg/m <sup>2</sup> )	0,6 – 0,7	
- Aggregate consumption (kg/m <sup>2</sup> )	2,0 – 2,5	
<i>Fluid mortar:</i>		
- Resin consumption (kg/m <sup>2</sup> and mm thickness)	1,0	
- Aggregate consumption (kg/m <sup>2</sup> and mm thickness)	1,7	

\* 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.



### 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](mailto:info@drizoro.com) Web site: [drizoro.com](http://drizoro.com)

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