



# POLYAC® 18

RIGID, VERY FAST CURING, PMMA-BASED PRIMER FOR POLYAC® SYSTEMS, TO BE APPLIED ON DAMP MINERAL SURFACES



## Description

POLYAC® 18 is a rigid, very fast curing, PMMA (Polymethyl methacrylate) based primer for the POLYAC® systems, to be applied on damp mineral surfaces, new concrete and wood.

## Benefits

- On damp surfaces
- High reactivity
- Fast curing
- Applicable at low temperature
- Optimal viscosity
- Widely applicable
- Can be applied horizontally and vertically
- Optimized polymerization under difficult conditions
- Can be applied with roller or brush

## Field of Application

POLYAC® 18 is a rigid primer for the POLYAC® floor, membrane and other POLYAC® systems that are applied to damp mineral, absorbent surfaces such as sand/cement screeds, concrete, brick, tiles. The primer has excellent adhesion and can be applied at temperatures below freezing thanks to its rapid reaction and good reactivity. POLYAC® 18 can be used as concrete protection and the sanded-in variant can be used as a fast primer for epoxy and polyurethane floor systems. We recommend first hardening and adhesion testing on the surface in question before applying the entire surface.

## Application

Note: The following is a typical application description. In case of other jobsite parameters, please contact our technical department.

## Preliminary analyses

Before starting the substrate preparation and applying the products, it is important to test various parameters in order to achieve a good and sustainable result.

- Compressive strength of the substrate: min. 25 N/mm<sup>2</sup>.
- Tensile strength of the substrate: min. 1,5 N/mm<sup>2</sup>.

Visible water present on the surface is not allowed. Moisture content in the substrate: ≤ 10% moisture.

Conditions during the application and curing: see "Application conditions" further described in this technical data sheet.

Technically studied dilatation joints must be provided. These are resumed in the synthetic resin system to be installed.

The flatness of the surface must be consistent with the desired requirements. Should this not be the case, correct measures must be taken to fill in or smooth out the unevenness with products that are complementary to the substrate and to the synthetic resin system to be installed.

Shrink joints and passive cracks can be coated. This on condition that they are not used as dilatation joints or if they do not follow other movements of the structure and the substrate and that they are flattened with products that are complementary to the substrate and to the synthetic resin system to be installed.



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## Required tools

- Mixer with spindle (min. 300 rpm)
- Divider-wiper
- Brush or pain roller suitable for synthetic resin-based products
- Masking tape

## Preparation of the substrate

Cracks, joints and other parts that show water leaks must first be made completely water-tight and leak-proof.

The surface must be mechanically pre-treated. This can be achieved by removing the dust by bullet- or sandblasting or by grinding the surface.

Tiles are to be degreased well and grinded with a diamond blade. These treatments ensure that an open texture surface is obtained, to remove the cement skin from concrete and old remnants of coatings and adhesives.

High pressure water jetting is possible but then the surface must dry sufficiently (moisture content in the substrate:  $\leq 5\%$  moisture) before applying the primer.

Always apply the products on a clean surface, free from adhesion reducing materials such as dirt, oil, grease, old coatings or surface treatments.

The parts of the surfaces to be coated that do not meet the requirements as described above (compressive strength, tensile strength, parts that are not well connected) must be treated or removed and repaired according to a correct method and with products that are complementary to the substrate and the synthetic resin system to be installed. Remove any loose parts by brushing properly and remove dust with an industrial vacuum cleaner.

## Preparation of the product

### Mixing

Mix POLYAC® 18 well before use. Paraffin can separate during storage. Dispense an amount of resin that can be processed within 15 minutes. Add 1 to 5% curing powder. POLYAC® CATALYST must be ordered separately.

Add POLYAC® CATALYST to POLYAC® 18		
Temp.	In%	POLYAC® CATALYST per 1kg POLYAC® 18
0°C	5%	50 g
5°C	4%	40 g
10°C	3%	30 g
20°C	2%	20 g
30°C	1%	10 g

Mix until the powder is completely dissolved.



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## Preparation of the equipment

Always work with clean mixing containers and application material.

## Application

POLYAC® 18 is evenly distributed with a rubber squeegee or a shorthaired paint roller. Apply enough primer to create a tight coat with full coverage. Apply a second coat of POLYAC® 18 on highly porous surfaces. Extra mechanical adhesion can be obtained by broadcasting dry filter sand into the layer that has not yet cured (0,5 kg/m<sup>2</sup>). Polyurethane and epoxy systems can only be applied on a broadcasted POLYAC® 18 primer.

Note: Do not disturb the paraffin layer that occurs during curing.

## Finishing

The cured primer can be overcoated after one hour (+20°C) with the POLYAC® system to be installed.

## Application conditions

Conditions during the application and curing of the products.

The recommended processing temperature for substrate, environment, material and products is between +5°C and +35°C. For temperatures lower than +5°C please contact RESIPLAST NV.

Relative humidity: Max. 85%

Dew point: The temperature of the substrate and of the not fully cured product must be at least 3°C higher than the dew point. Avoid condensation on the surface until the products have fully cured. Ensure adequate ventilation and a low relative humidity during curing.

## Cleaning and maintenance

Clean the used tools with SOLVENT MEK or ethyl acetate before the curing of POLYAC® 18. Cured products residues must be removed mechanically.

For the cleaning and maintenance of the installed synthetic resin system, please refer to the information leaflets:

Cleaning and maintenance of synthetic resin floor systems – INDUSTRY

Cleaning and maintenance of synthetic resin floor systems– PUBLIC AND PRIVATE BUILDINGS.

## Complimentary products

- Cleaning solvent for tools: SOLVENT MEK or ethyl acetate
- POLYAC® CATALYST

## Advice/focal points

As primer on a contaminated surface:

- First perform an adhesion and hardening test. After the substrate preparation, take a small amount of POLYAC® 18.
- Add 3% of POLYAC® CATALYST. Mix until the powder is completely dissolved. Pour the mixture in a large layer over the surface and let it cure completely. Test the adhesion by separating the primer from the surface with a hammer and chisel. With a sticky or poorly adhering contact surface, the substrate must be further cleaned or an alternative primer must be selected.

## Appearance – Composition

Liquid with low viscosity, colourless, slightly cloudy.



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## Reaction times

Processing time after mixing: 10 to 15 min.

Trafficable: after 1 hour

Recoatable: after 1 hour

Full mechanical load: after 2 hours

Full chemical resistance: after 2 hours

Times measured at 20°C; lower temperatures extend the curing time.

## Consumption

Consumption: 0.35 kg/m<sup>2</sup>

For porous surfaces the consumption is higher.

## Technical Data

Odour	Methyl methacrylate (See also information sheet "POLYAC® ODOUR")
Initiator: POLYAC® CATALYST	BPO 50%, depending on the temperature from 1% to 5 weight % calculated on the proportion of POLYAC® 18
Viscosity	100 – 150 mPa.s (EN ISO 3219 at 20°C, Brookfield, spindle III/200 rpm)
Density	0.99 g/cm <sup>3</sup> ±0.03 (EN ISO 2811-1 at 20°C)
Flash point	10°C (MMA, DIN 51 755)
Exothermic peak	120 – 145°C
<b>POLYAC® 18 + 2% POLYAC® CATALYST</b>	
Density	0.98 kg/dm <sup>3</sup>
Colour	Yellow-brown transparent
Shore D hardness	70 – 80

## Chemical resistances

Polymerized POLYAC® resins have good chemical resistance to alkalis, petroleum derivatives, acid, salts and maintenance products. POLYAC® resins are not resistant to solvents. For more information please contact RESIPLAST NV.



# POLYAC® 18

## CE MARKING

<b>CE</b>	
KORAC NV, Gulkenrodestraat 3, 2160 Wommelgem, Belgium	
12	
EN 13813	
Synthetic resin floor/coating for indoor use in buildings	
Release of corrosive substances	SR
Abrasion resistance	NDP
Bond strength	≥ B2,0
Impact resistance	NDP
Reaction to fire	E <sub>fl</sub>

## Reference documents

Information sheet "POLYAC® ODOUR".



## Packaging

<b>POLYAC® 18</b>	20 kg	Metal pail
	180 kg	Drum

To be ordered separately:

<b>POLYAC® CATALYST</b>	0,5 kg	Plastic pail
	5 kg	Plastic pail
	25 kg	Box

## Storage and shelf life

Store POLYAC® products in a dry, well-ventilated storage area between +5 and +35°C.

Shelf life: 12 months after production date.

In case of doubt, please contact RESIPLAST NV and state the batch number on the packaging. Do not discharge into groundwater, surface water or sewers. Dispose of contaminated packaging and residues in accordance with the applicable legal requirements.



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## Safety precautions

Carefully read the safety data sheets before using POLYAC® products. A characteristic odour arises during processing. Ensure adequate ventilation, keep away from sources of ignition and do not smoke. Avoid skin contact. Eye irritation and/or hypersensitivity may occur with severe vapour concentration, inhalation and/or skin contact. Do not store food, drinks in the same workspace. Always wear personal safety equipment in accordance with the applicable local guidelines and legislation. Gloves and safety glasses are mandatory.

### Warranties and Disclaimers

Hychem warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper use and application of the product by the applicator. Hychem has no role in the application of the finished polymer other than to manufacture and supply its components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of spray equipment and application of sol-gel materials. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by Hychem and executed under seal by a company officer.

### Field Support

Field support where provided, does not constitute supervisory responsibility. Suggestions made by HYCHEM either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they and not HYCHEM are responsible for carrying out procedures appropriate to a specific application.

### Customer Responsibility

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