



POLYAC® 55

FAST CURING PUMA BINDER FOR SELF LEVELLING, MEDIUM SOFT FLOORS, LEVELLING LAYERS AND WEAR LAYERS



Description

Fast curing binder based on PUMA (polyurethane methacrylate) for making self-levelling floors, levelling layers and wear layers with a layer thickness of 1 to 5 mm.

Advantages

POLYAC® 55 has excellent adhesion and can be applied at temperatures below the freezing point thanks to its fast and good reactivity.

- High reactivity
- Fast curing
- Applicable at low temperature
- Gradation of anti-slip finish possible
- Different layer thicknesses possible
- Low viscosity
- Widely applicable by adaptation of POLYAC® CATALYST and fillers

Field of Application

POLYAC® 55 is ideally suited for medium soft impact resistant floor finishes, applications on slightly damaged substrates and floors where limited thermoshock is possible. Also suited as levelling or wear layer.

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/mm²
- Tensile strength of the substrate: min. 1,5 N/mm²

POLYAC® 55 must be applied a dry surface. Moisture content in the substrate: ≤ 5% moisture.

Exception: ≤ 10% moisture if the primer POLYAC® 18 are used.

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.



POLYAC® 55

- 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.

Required tools

- Mixer with spindle (min. 300 rpm)
- Spatula, rake or toothed trowel
- Spiked roller
- Masking tape

Preparation of the substrate

It is not necessary to place a primer on existing POLYAC® systems before applying POLYAC® 55.

POLYAC® 55 is always applied on a suitable primer depending on the type of substrate.

POLYAC® 12: Dry, form-retaining, mineral substrates.

POLYAC® 14: Moving or less form-retaining mineral substrates, asphalt or bituminous membranes.

POLYAC® 15: Metal. POLYAC® 18: Damp, form-retaining, mineral substrates.

(Always consult the POLYAC® primers technical data sheets)

Before applying the primer.

Tears, cracks, joints and other elements showing water leaks must be made fully water 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 before applying the primer.

(Moisture content in the substrate: $\leq 5\%$ moisture. Exception: $\leq 10\%$ moisture if the primer POLYAC® 18 is used.)

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.

The surface must be mechanically pre-treated. this can be achieved by removing the dust by bullet- or sandblasting or by grinding the surface. The degree of roughness for metal surfaces is SA 21/2. Remove rust by sandblasting. The surface must be dry and free of impurities such as grease, oil or dust.

Galvanized steel is thoroughly cleaned in advance with water and soap or sandblasted. Degrease metal surfaces immediately after the mechanical preparation with SOLVENT MEK. After the SOLVENT MEK has fully evaporated, immediately apply a layer of POLYAC® 15 to prevent the steel from re-oxidizing.

Preparation of the product

Mix POLYAC® 55 well before use. Paraffin can separate during storage. Dispense an amount of resin that can be processed within 15 minutes. If a different colour is desired than the standard colour, you can now add 5% pigment powder (by weight of the resin part) to the resin and mix it well until a homogeneous mass is achieved.

The amount of aggregates is determined by the layer thickness, the climatic conditions and the application.



POLYAC® 55

Layer thickness	Mixing examples	Density
1 to 2 mm	1 kg POLYAC® 55 resin + 2 kg POLYAC® SL2 filler	1.7 kg/dm ³
3 to 5 mm	1 kg POLYAC® 55 resin + 3 kg POLYAC® SL2 or SL3 filler	1.8 kg/dm ³

Add the filler and mix again until a homogeneous mixture is achieved.
Add 1 to 5% curing powder. POLYAC® CATALYST must be ordered separately.

Add POLYAC® CATALYST to POLYAC® 55		
Temp.	In%	POLYAC® CATALYST per 1 kg POLYAC® 55 (resin part)
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.

Preparation of the equipment

Always work with clean mixing containers and application material.

Application

- Spread the mixture with a spatula, rake or toothed trowel. and immediately vent and level with a spiked roller.
- An anti-slip surface is obtained by fully broadcasting it with the desired type of granulate. (4 to 5 kg/m²)
- Processing time of POLYAC® WLW is 10 to 15 minutes.

Finishing

After one hour this layer can be covered with a POLYAC® Topcoat.

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 from the moment that the preparations start until the complete curing of the products.
Ensure adequate ventilation and a low relative humidity during curing.



POLYAC® 55

Cleaning and maintenance

Clean the used tools with SOLVENT MEK or ethyl acetate before the curing of POLYAC® 55. Cured products residues must be removed mechanically.

For cleaning and maintenance of the installed synthetic resin systems please refer to the information sheets:

- 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
- POLYAC® SL 2 FILLER or SL 3 FILLER (depending on the desired thickness of floor, levelling layer of wear layer).
- Pigment powder

Advice/focal points

Always consult all technical and safety data sheets of the products concerned.

Appearance – Composition

Liquid with low viscosity, azure blue, slightly cloudy.

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

0,4 to 0,6 kg POLYAC® 55 resin per m² per 1 mm layer thickness.



POLYAC® 55

Technical Data

Odour	Methyl methacrylate
Initiator: POLYAC® CATALYST	BPO 50%, depending on the temperature from 1% to 5 weight % calculated on the proportion of POLYAC® 55
Viscosity	160 – 280 mPa.s (EN ISO 3219 at 20°C, Brookfield, spindle III/200 rpm)
Density	0.99 g/cm ³ ±0.03 (EN ISO 2811-1 at 20°C)
Flash point	10°C (MMA, DIN 51 755)
Hardening test (test volume)	300 g POLYAC® 55 with 6 g curing powder
Exothermic peak	110 – 130°C
POLYAC® 55 + 2% POLYAC® CATALYST + SL2 or SL3	
Density	1.7 – 1.8 kg/dm ³
Colour	Beige-brown
Shore D hardness	75 – 85

Chemical resistances

Polymerized POLYAC® resins have good chemical resistance to alkalis, petroleum derivatives, acid, salts and maintenance products. For more information please contact RESIPLAST NV.

CE MARKING

CE	
KORAC NV, Gulkenrodestraat 3, 2160 Wommelgem, Belgium	
22	
EN 13813	
Synthetic resin floor/coating for indoor use in buildings	
Release of corrosive substances	SR
Abrasion resistance	≤ AR0,5
Bond strength	≥ B2,0
Impact resistance	≥ IR10
Reaction to fire	E _{fl}

Reference documents

Information sheet "POLYAC® ODOUR".





POLYAC® 55

Packaging

POLYAC® 55	20 kg	Metal pail
	180 kg	Drum

To be ordered separately:

POLYAC® CATALYST	0,5 kg	Plastic pail
	5 kg	Plastic pail
	25 kg	Box

POLYAC® SL2 or SL3 FILLER	20 kg	Bag
---------------------------	-------	-----

POLYAC® CATALYST	1 kg	Plastic pail
	5 kg	Plastic pail
	25 kg	Bag

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.

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 or 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

The technical information and application advice given in this publication is based on the best information available at the time of print. As the information herein is of a general nature, no assumption can be made as to the product suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.