

POLYAC® M

ULTRA FAST CURING, RIGID, PMMA BASED REPAIR MORTAR SYSTEM.



DESCRIPTION

POLYAC® M is based on a fast curing PMMA (polymethyl methacrylate) resin. Combined with fillers, a hard acrylic mortar with high mechanical resistance and fast curing is obtained.

ADVANTAGES

- High reactivity
- Very fast curing
- excellent adhesion to concrete
- Applicable at low temperature
- Optimal viscosity
- Widely applicable

FIELD OF APPLICATION

Repair mortar for:

- Floors
- Plinths in industry
- Terraces, balconies, galleries
- Bridge decks
- Parking decks, parking roofs, ...

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® M must be applied a dry surface.

Moisture content in the substrate: ≤ 5 % moisture.

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

Conditions during the application and curing: see "implementation 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.

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)

Trowel, spatula

Compacting rod and eventual a vibrating plate.

Masking tape.

PREPARATION OF THE SUBSTRATE

If POLYAC® M mortar is applied in layers thinner than 10 mm, a suitable POLYAC® primer has to be applied depending on the type of substrate. POLYAC® 12: Dry, form-retaining, mineral substrates. POLYAC® 14: Moving or less form-retaining mineral substrates, asphalt. POLYAC® 15: Metal. POLYAC® 18: Damp, form-retaining, mineral substrates. (Always consult the POLYAC® primers technical data sheets) It is not necessary to place a primer on existing POLYAC® systems before applying POLYAC® M. Before applying the primer: 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. 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 overcoated that do not meet the requirements as described above (compressive strength, tensile strength, improperly bonded parts, ...) must be removed.

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 sanding 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.

Install formwork if necessary.

PREPARATION OF THE PRODUCT

Mix POLYAC® M well before use. Paraffin can separate during storage. Depending on the layer thickness and the required fluidity, add the correct amount of POLYAC® M Filler to the POLYAC® M resin.

POLYAC® M	Weight ratio	Layer thickness	Mortar volume per 1 kg POLYAC® M resin after mixing in the fillers
POLYAC® M POLYAC® M filler Total	1 7 8	6 mm	1 kg POLYAC® M resin + 7 kg filler gives: 4,6 litre (or dm ³) mortar
POLYAC® M POLYAC® M filler Total	1 8 9	10 mm	1 kg POLYAC® M resin + 8 kg filler gives: 4,9 litre (or dm ³) mortar
POLYAC® M POLYAC® M filler Total	1 9 10	15 mm	1 kg POLYAC® M resin + 9 kg filler gives: 5,4 litre (or dm ³) mortar
POLYAC® M POLYAC® M filler quartz 2 – 3 mm Total	1 7 3 11	> 20 mm	1 kg POLYAC® M resin + 10 kg filler gives: 5,9 litre (or dm ³) mortar

Mix intensively for at least one minute until a homogeneous mortar is obtained.

PREPARATION OF THE EQUIPMENT

Always work with clean mixing containers and application material.

APPLICATION

Pour the mortar on to the prepared substrate. Compacting will increase mechanical resistance.

Finishing can be done with trowel, spatula or vibrating plate. Liquid resin on the mortar surface means that too much resin was used; a matte surface suggests too little resin.

FINISHING

After 1 hour (at 20 °C), if desired, another POLYAC® system can be applied over POLYAC® M.

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.

CLEANING AND MAINTENANCE

Clean the used tools with SOLVENT MEK or ethyl acetate before the curing of POLYAC®-M. 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® M FILLER
- Depending on layer thickness : quartz 2 - 3 mm

ADVICE / FOCAL POINTS

POLYAC® M Filler contains initiator. For applications up to +5 °C do not add extra initiator. For temperatures under +5 °C, please contact RESIPLAST NV.

TECHNICAL DATA

APPEARANCE - COMPOSITION

POLYAC® M	Reactive acrylic resin, transparent, azure blue.
POLYAC® M Filler	Grey beige filler
Colour mixture	Beige.

REACTION TIMES

Processing time after mixing: 10 to 15 min.

Trafficable: after 30 min.

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

See the box under "Product preparation".


TECHNICAL DATA

Odour	Methyl methacrylate
Initiator: POLYAC® CATALYST	BPO 50 % POLYAC® M Filler already contains POLYAC® CATALYST. For applications above +5 °C do not add extra initiator.
Viscosity	75 mPa.s +/- 25 mPa.s (20 °C Brookfield, spindle III/200 rpm)
Specific mass (resin)	0,97 g/cm ³ ±0,3 (20 °C)
Flash point	10 °C (MMA, DIN 51 755)
Exothermic peak	130 - 145 °C
Mortar: POLYAC® M + POLYAC® M Filler	
Specific mass	2 kg/dm ³
Compressive strength	> 50 N/mm ²
Tensile strength	> 08 N/mm ²
Bending tensile strength	> 18 N/mm ²
Bonding to concrete	Exceeds the strength of concrete
E-modulus	> 1100 mPa
Temperature resistance	70 °C continuous
Layer thickness	From 6 mm
Surface aspect	Matt, anti-slip

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 TABLE

	
Resiplast NV, Gulkenrodestraat 3, B-2160 Wommelgem	
12	
EN 13813	
Synthetic resin based coating for use in buildings.	
Reaction to fire	E _{fl}
Release of corrosive substances	SR
Water permeability	NPD
Wear resistance (EN 13892-4)	AR 1,0
Adhesive pull strength (EN 13892-8)	>B 2,0
Impact resistance (DIN EN ISO 6272)	>7 Nm
Sound insulation	NPD
Sound absorption	NPD
Thermal insulation	NPD
Resistance to chemicals	NPD

REFERENCE DOCUMENTS

Information sheet "POLYAC® ODOUR".



PACKAGING

POLYAC® M	20 kg	Metal bucket
	180 kg	Barrel

To be ordered separately:

POLYAC® M Filler	20 kg	Bag
Quartz 2 -3 mm	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 of 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 (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.

The above information is provided in good faith, but without any guarantees. The application, use and processing of the products are beyond our control and are, as such, the sole responsibility of the user/processor. In the event that Resiplast N.V. is still held liable for damages, then the claim will still be limited to the value of the goods delivered. We always aim to deliver consistently high quality goods. All values on this technical sheet are average values that result from tests carried out under laboratory conditions (20 °C and 50 % RH). Values that are measured on the construction site may show a slight deviation since the environmental conditions, the application, and the way of processing our products are beyond our control. Do not add any products other than those indicated on the technical documentation. This version replaces all previous versions. Version 2.0 Date: 7 May 2021 8:45 am