Technical Data Sheet

Starcoat PMMA Self-Levelling Mortar

Starcoat PMMA Self-Levelling Mortar is a flexible, self-levelling mortar for utilised areas, such as roof terraces, balconies and multi-storey car parks.

In Starcoat PMMA liquid waterproofing systems it serves as protection for the waterproofing layer. When used in surfacing systems it is applied as a thick-film coating.

Material

3-component, fast-reactive, flexible and filled PMMA-based (polymethyl-methacrylate) self-levelling mortar.

Properties and advantages

- Versatile – can be used as waterproofing protection, thick-film layer and equalising layer
- Suitable for areas exposed to mechanical loads (pedestrians, vehicles)
- Cost-efficient solution for surfacing floor areas without cracks or with only hairline cracks
- Fully bonded to the substrate, therefore no flow paths for water
- Easy and fast application

- Fast-curing
- Can also be applied at sub-zero temperatures
- Can be applied to almost all substrates, including variable substrates (when combined with Starcoat PMMA Primers)
- Solvent-free

Use

Starcoat PMMA Self-Levelling Mortar is part of the Starcoat PMMA liquid waterproofing system and is used as protective layer, thick-film coating or equalising mortar.

It protects the waterproofing layer against the impact of traffic due to its load-distributing effect (protective layer).

In areas subject to mechanical loads that are either free from cracks or have only hairline cracks, it is used as a thick-film coating without the waterproofing layer.

It can also be used as an equalising mortar under Starcoat PMMA systems to level out areas of damage and up to 10mm height differences.

Packaging

(comprising the Starcoat PMMA mortar (base resin), self-levelling aggregrate and the catalyst)

Summer		Winter	
10.00 kg	Starcoat PMMA Self-levelling Mortar (base resin)	10.00 kg	Starcoat PMMA Self-levelling Mortar (base resin)
23.00 kg	Starcoat PMMA Self-levelling Aggregate	23.00 kg	Starcoat PMMA Self-levelling Aggregate
0.20 kg	Starcoat PMMA Catalyst (2 x 0.1 kg)	0.40 kg	Starcoat PMMA Catalyst (4 x 0.1 kg)
33.20 kg		**33.40 kg**	

Colours

Starcoat PMMA Self-Levelling Mortar is available in the following standard colours:
RAL 7032 Pebble Grey

Storage

Products should be stored sealed in their original airtight container and in a cool, dry, frost-free place. Unopened products have a shelf life of at least 6 months. Direct sunlight on the containers should be avoided, including on site. After removing some of the contents, reseal the containers so they are airtight.

Application conditions

Temperatures

The product can be applied within the following temperature ranges:

Product	Temperature range in °C		
	Air	Substrate	Material
Starcoat PMMA Self-Levelling Mortar	+3 to +35	+3 to + 50*	+3 to +30

*the substrate temperature must be at least 3°C above the dew point during application and curing.
The substrate temperature must not be less than +3 C if a topping is applied to the surface. Reaction problems can occur at lower temperatures. (See preparation for subsequent layers).

Moisture

The relative humidity must be ≤ 90 %. The surface to be coated must be dry and ice-free.

The surface must be protected from moisture until the coating has hardened.

Reaction times and required amounts of catalyst

Temperature	Starcoat PMMA Self-Levelling Mortar (at 20°C, 2% Starcoat catalyst)
Pot life	approx. 15 minutes
Rain--proof after	approx. 30 minutes
Can be walked on / overcoated after	approx. 1 hour
Curing time	approx. 3 hours

Higher temperatures or greater proportions of Starcoat PMMA Catalyst will reduce reaction times, while lower temperatures and smaller proportions of Starcoat PMMA Catalyst will increase reaction times.

The following table indicates the recommended amount of Starcoat PMMA Catalyst required to adjust the curing reaction to the temperature. The amount of Starcoat PMMA Catalyst required is determined by the quantity of resin, i.e. Starcoat PMMA Self-Levelling Mortar.

Product	Substrate temperature in °C / required amounts of Starcoat PMMA Catalyst in % (guide)												
	-10	-5	+3	5	10	15	20	25	30	35	40	45	50
% Starcoat PMMA Self-Levelling Mortar	-	-	6	6	4	4	2	2	2	2	1	1	1

Consumption rates

Substrate — Approximately 4.00 kg / m^2 for a smooth substrate.

Technical Data

Density	
Starcoat PMMA self-levelling mortar	1.76 g/cm^3
(Starcoat PMMA self-levelling base resin	1.00 g/cm^3)
(Starcoat PMMA self-levelling aggregate	2.61 g/cm^3)
Water vapour diffusion resistance factor:	23.718 (-)

Application

Application equipment/tools

For mixing product: Twin paddle stirrer.

Substrate preparation

For applying the product: Coating trowel with triangular teeth (notch pattern 92) or

Finishing trowel.

Substrate to be coated

Apply the Starcoat PMMA Self-Levelling Mortar to the hardened Starcoat PMMA primer or the hardened Starcoat PMMA waterproofing layer as required.

Mixing

First stir the Starcoat PMMA Self-Levelling Mortar (base resin) thoroughly and transfer to a mixing container. Then add the Starcoat Self-Levelling Aggregate (sand) to the resin while stirring and continue until a smooth consistency is achieved (no lumps).

Add the Starcoat PMMA Catalyst while stirring at a slow speed setting and mix for 2 minutes. Ensure that the product on the base and sides of the container is mixed in. At product temperatures <10°C the product should be stirred for 4 minutes as the Starcoat PMMA Catalyst will take longer to dissolve.

Application

Use a notched or smoothing trowel to apply an even coat of the mixed Starcoat PMMA Self-Levelling Mortar (approx. 4.0 kg/m^2).

Preparation for subsequent layers

Surfacing supplied by others and applied subsequently:

- **Fully bonded surfacing (e.g. tiles)**

While the self-levelling mortar is still liquid, top with a generous amount of Starcoat PMMA Quartz Aggregate (quartz sand ≥ 0.2 – 0.6 mm). Vacuum off the excess/loose sand after the surface has hardened. The sand topping creates the required rough surface (key) and absorbency for the subsequent application of surfacing supplied by others.

Only use dry Starcoat PMMA Quartz Aggregate (e.g. quartz sand).

- **Application as equalising mortar**

To equalise layer thicknesses of between 3 mm and 10 mm, add additional amounts of coarse, fire-dried Starcoat PMMA Quartz Aggregate (1 – 2 or 2 – 3 mm) to the mixed Starcoat PMMA Self-Levelling Mortar before adding the Starcoat PMMA Catalyst (15 – 20 kg quartz aggregate to 33 kg Self-Levelling Mortar). Once the Starcoat PMMA catalyst has been mixed in and dissolved, apply the mortar using a trowel.

Cleaning	If work is interrupted or when it is completed, clean the tools thoroughly with Starcoat Universal Cleaning Agent within the pot life of the product (approx. 10 minutes). This can be done with a brush. Do not use the tools again until the Starcoat Universal Cleaning Agent has fully evaporated. Simply immersing the tools in the Cleaning Agent will not prevent the material from hardening.
Safety and risks	Please refer to the Safety Data Sheets for the products used.

General information

The above product and application information is based on extensive development work and experience and is provided to the best of our knowledge. However, the wide variety of requirements and conditions on site mean that it is necessary for the product to be tested to ensure that it is suitable for the intended purpose. Only the most recent version of the document is valid. We reserve the right to make changes to reflect advances in technology or improvements to our products. Axter Ltd makes no warranties, express or implied, as to the properties and performance under any variations from such conditions in actual construction.