



CASTING RESIN FOR THE CERAMIC INDUSTRY

ALWA MOULD P – TRIAL PRODUCT

ALWA MOULD P is a cold curing casting resin for the production of porous moulds, slabs and blocks for the ceramic industry. It is a porous and high-strength plastic, which is well-suited for high pressure casting applications. ALWA MOULD P can be used in various areas of the tableware and sanitary ceramics, technical ceramics, plastic mould procedure as well as various filtration processes. The high stability and defined porosity of the material allows highly accurate mould surface reproductions. With ALWA MOULD P various geometric moulds for filtration processes of suspensions can be produced. ALWA MOULD P can be used for ceramic slip pressure casting procedures. In this procedure, water is removed by a filtration process of a clay suspension (slip), so that an increasing clay layer is built on the mould wall over time. The moulds, slabs and blocks of ALWA MOULD P are easily machinable (e.g., drilling, milling).

ALWA MOULD P can be flexibly adjusted due to the customers' requirements concerning the total porosity and average pore diameter.



Technical data at RT:

Characteristic	Unit	Value
Processing temperature of the mixture	°C	15 – 16
Glass transition temperature	°C	approx. 100
Reaction temperature	°C	< 65
Density according to DIN 1306 (filled with water)	kg/l	1.15
Shelf life at 16 °C to 22 °C (do not store below 12 °C)	month	6
Total porosity of the mould	%	28 – 32
Average pore diameter of the mould	µ	~ < 10 – ~ < 20

Preparation of the pattern

The surfaces to be treated must be completely clean (free of dust and grease).

- Build up the pattern on a base plate. Porous patterns (e.g., PU foam) must be smoothed with putty.
- Absorbent surfaces (e.g., wood, plaster) are sealed with lacquer (do not use acrylic lacquer!).




Calculation of the batch quantity

Calculate the casting volume in litre. In order to make up casting losses, we recommend increasing the batch quantity by approx. 5 %.

Product	Article number	Parts
ALWA MOULD P	2000	20
Filler	2720	52
Water	-	28

Processing

The temperature of the room and pattern should be between 17 °C and 20 °C, otherwise the pot life changes.

Batch quantity < 10 kg			
Aim: Average pore diameter from ~ < 10 μ	Resin and water are mixed homogeneously.	The mixture is carefully stirred into the filler at a rotational speed of approx. 700 – 1000 (special mixer) for approx. 90 sec.	After the resin and the filler have been mixed homogeneously, the casting compound has to be poured within 5 min.
Aim: Average pore diameter from ~ < 20 μ		The mixture is carefully stirred into the filler at a rotational speed of approx. 550 (special mixer) for approx. 70 sec.	
Batch quantity > 10 kg			
We recommend to stir the complete mixture in a bucket for approx. 55 sec. Afterwards, transfer one half into a second bucket. Mix both mixtures according to the remaining stirring time.			
Aim: Average pore diameter from ~ < 10 μ	Water and filler are mixed homogeneously (approx. 60 sec.).	The resin is immediately added to the mixture at a rotational speed of approx. 415 (special mixer) for approx. 90 sec.	After the resin and the filler have been mixed homogeneously, the casting compound has to be poured within 5 min.
Aim: Average pore diameter from ~ < 20 μ		The resin is immediately added to the mixture at a rotational speed of approx. 485 (special mixer) for approx. 70 sec.	
			

For mixing, we recommend to use exclusively our SPECIAL MIXERS with the buckets provided as well as explosion proof mixing devices with the most accurate speed controller. After curing of the mould (approx. 2 ½ – 3 ½ hours after adding the resin), it is demoulded and the casting is put into a heated water bath up to 40 °C for approx. 12 hours. The mould is wrapped in a foil for storage, so that no water can escape. Mould areas that should not be porous are sealed with lacquer. The moulds must not dry out and, therefore, are generally stored in a water bath.

Packages

Product	Unit (kg)	Package
Resin	5	Can
	25	Hobbock
	50	Drum
	200	Drum
Filler	10	Bucket
	50	Cardboard drum