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Liquid polyurethane for creative, industrial concrete manufacturers



The challenge of manufacturing wetcast molds with simple means for a small series, or for implementing a creative idea in stone, is taken up by creative concrete manufacturers. With the new Wasa PUR, made available as a special offer, concrete manufacturers can now draw on a tried-and-tested system for the in-house manufacture of wetcast molds.

Wasa PUR is a two-component casting resin specially developed for this application. Due to the low viscosity of both components and a prolonged pot life of at least 30 minutes,

the casting mass is simple to process using an open, manual casting technique. To ensure the widest possible range of applications, the polyurethane system is now available in four degrees of hardness: hard, standard, medium and soft.

The advantages of the PUR systems are:

- simple homogeneous mixing of the two components
- fast de-aeration and fine levelling of the casting mass
- balanced, field-proven release agent for modeling and concrete cast stone production
- faithful image of the template
- no staining of the final product
- free from plasticizers and mercury
- fulfil all requirements of the European REACH chemicals regulation

Processing of PUR casting resins

PUR casting resins are processed at temperatures between 18 °C and 25 °C. Before use, especially after prolonged storage, the components must be carefully homogenised by vigorous stirring.

In order to introduce as little air as possible into the casting compound during the stirring process, we recommend the



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Technical data - Wasa PUR

Series	Product	Shore Hardness	Container Sizes			Mixing Ratio A : B	Pot Life (min.)	Viscosity at 20°C (cP)		System Density (at 20°C)
			Sizes	A	B			A	B	
PUR 19 -Series-	WASA PUR 85-1901 A+B	A85 Hard	S	7,5 kg	2,4 kg	100 : 32	60	A1	2.450	1,12
			M	25 kg	8 kg			B1	500	
			L	200 kg	225 kg					
			XL	1.000 kg	225 kg					
	WASA PUR 65-1901 A+B	A65 Standard	S	7,5 kg	1,65 kg	100 : 22	55	A2	2.700	1,12
			M	25 kg	5,5 kg			B2	500	
			L	200 kg	225 kg					
			XL	1.000 kg	225 kg					
PUR 20 -Series-	WASA PUR 45-2001 A+B	A45 Medium	S	7,5 kg	7,5 kg	100 : 100	30	A3	750	1,04
			M	25 kg	25 kg			B3	6.000	
			L	200 kg	200 kg					
			XL	1.000 kg	1.000 kg					
	WASA PUR 30-2001 A+B	A30 Soft	S	7,5 kg	10 kg	70 : 100	30	A4	200	1,04
			M	25 kg	30 kg			B4	8.000	
			L	200 kg	200 kg					
			XL	1.000 kg	1.000 kg					



With the available container sizes from 7.5 to 1,000 kg, it is possible to order the required quantities according to demand.

use of a mixer specially developed for the purpose. It is important to ensure that a separate mixer is used for each component or that the mixer is carefully cleaned after each use, otherwise chemical reactions will occur between the adhering components. Acetone is best used to clean the mixer.

After de-aerating the individual components, the resin and hardener can now be mixed together in the specified ratio. To ensure the prescribed mixing ratio, the scale should have a measuring accuracy of at least one gram. It is advisable to start with the component that has the larger mass portion in the mixture and then add the second component accordingly. Total quantities should also be as even as possible in order to avoid calculation errors. With a prescribed mixing ratio (A/B) of 100/22 parts, total quantities of 122 g, 244 g or a multiple thereof can be selected. Here, too, it is important to ensure good mixing while keeping the air input low.

The mixture is then poured into a second container so that any air bubbles that have been stirred in can escape from the mass

In order to prevent the moisture-sensitive materials from reacting with the air humidity, the containers must be sealed moisture-proof again immediately after removal of partial quantities. When processing, ensure that the conditions and surfaces of the mold are dry. If contaminated by moisture, the material foams up. This effect can be useful with adhesives, but is very unpleasant when it comes to modeling.

Release agent

Silicone spray (ready for processing in cans) or waxes (canister goods) can be used as release agents. Important here is the complete wetting of the model. When using the model for the first time, the release agent should be applied several times to saturate absorbent model materials. Waxes can be applied with so-called airless devices in order to keep the resulting overspray as low as possible and to minimize the formation of release agent residues. If an additional layer of release agent is applied, it can be rubbed off with a lint-free cloth. After the final application of the release agent, the casting pattern should still be allowed to flash off well.



Wasa PUR is a low-viscosity two-component casting resin and is very suitable for large-sized molds and form liners.

Application examples

The liquid polyurethanes of the Wasa PUR family are particularly suitable for large-area modeling due to their low viscosity and long open time. The polyurethanes developed especially for the concrete block industry are used for small and large series for garden construction and landscaping and in the precast concrete industry.

Due to the low system density of 1.12 kg/l, the user gets more volume compared to common competitive products. ■



Organic-looking form for the final construction phase Crossrail London, Bond Street Station.

FURTHER INFORMATION



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