

DOLACAST 54

Dewatering aid



Chemical basis:

Preparation of polyamines and synthetic polymers

Characteristics:

Appearance:	slightly cloudy liquid
Active matter:	approx. 40%
Solubility:	water-miscible
Density (20°C):	approx. 1.05g/cm ³
pH:	> 12
Viscosity (20°C):	approx. 120mPas
Residue on ignition:	0.1% maximum

Shelf-life / Packaging:

12 months under proper conditions (+ 10 °C to 30 °C)
drums of 25 and 200 kg, containers of 1000 kg

Application:

DOLACAST 54 is used to accelerate the dewatering of pressure casting bodies, without significantly altering the rheology of the slip. This filtration aid is also suitable for conventional casting.

On account of its chemical composition the additive brings about the agglomeration of finegrained particles, which prevents them from penetrating into the mould capillaries and leads to a longer service life of the mould.

At the same time a network is set up by one of the functional groups included in the product. The particles only approach each other to such an extent that water can escape from between them under the influence of pressure. This results in the acceleration of dewatering and an increase in the casting rate.

The addition of DOLACAST 54 permits the casting time to be reduced. The body is homogeneous. Deformation phenomena are minimized by an even distribution of humidity. The body shrinks uniformly and hence shows less shrinkage damage and less tendency to cracking.

On account of the excellent dewatering properties of DOLACAST 54 the drying time of the cast pieces is reduced. Furthermore, depending on the individual article, the after pressing or respectively hardening time, and hence the total cycle time can be reduced.

The above results have been obtained from trials in our laboratory and plant. In the light of changing conditions they can serve only as a guide and are therefore offered without obligation. We ask you to observe the possible rights of third parties.

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The filtration aid is normally added to the make-up water during preparation. It is also possible to incorporate it in the slip. For this purpose the filtration aid should be mixed with water in a 1 : 3 ratio. Then immediately after it has been made up, the solution should be added **slowly and step by step** to the slip, using a rapid stirrer. The cross linkage of the fines may lead to an increase in slip viscosity, which generally decreases again during homogenisation. After allowing the slip to stabilise for at least 24 hours, it can be used in processing, even if the viscosity is slightly higher than before. Should the viscosity be too high, it can be reduced by the gradual addition of deflocculant. If the viscosity is too low, the proportion of deflocculant must be reduced.

For conventional casting the amount to be added generally varies between 0.01 and 0.03% of the solids content of the slip. The amount added to pressure casting bodies is approx. 0.02 - 0.20% of the solids content of the slip. However, the optimum addition quantity must be determined in your own trials.

Note:

The moulds can be treated with a mould cleaning agent from our GLYDOL serie. In order to prevent clogging of the moulds, they should always be carefully cleaned, which means that they should often be rinsed through.

In order to increase the dry breaking strength, DOLACAST 54 can be combined with a temporary binder, such as for example OPTAPIX AC 170 or OPTAPIX AC 112.

Storage temperatures below 10°C may lead to an increase in viscosity; additionally at temperatures below 2°C the product may freeze. The original viscosity can be re-established by heating up or "de-frosting" the product to temperatures of between 10 and 30°C. Stirring for a short time will also re-homogenize the product and compensate for any possible separation phenomena.

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