



OPTAPIX C 1000 G

Binder for glazes and engobes

Chemical basis

Purified sodium carboxymethylcellulose

Characteristics

Appearance	yellowish granulate
Moisture content	8 % maximum
Solubility	readily water-soluble
Bulk density	approx. 600 g/l
pH (1 %)	approx. 7
CMC content dry	approx. 99 %
Viscosity(1 %, 25 °C)	approx. 1200 mPas

Shelf-life / Packaging

12 months when stored properly and dry

bags of 25 kg

Application

OPTAPIX C types differ by their degrees of polymerization and hence the viscosities of their aqueous solutions.

OPTAPIX C types are used in glazes and engobes as viscosity adjusting, non-foaming binding agents. They improve the abrasion resistance, give glazes or engobes a good fit and prevent running.

Sodium CMC being a polyelectrolyte, the low viscosity, i.e. short-chain types like OPTAPIX C 12 G / C 25 G, have a deflocculating effect besides their binding property.

As far as the sodium CMC types with a medium degree of polymerization, such as OPTAPIX C 50 G, are concerned their electrolytic effect is to a large extent compensated by their increased intrinsic viscosity; they, therefore, have a rather neutral effect on the viscosity of the glaze slip, at the usual addition quantities.

High polymer types, such as OPTAPIX C 1000 G, have a thickening effect on the glaze slip.

In general, an increasing degree of polymerization will lead to better binding properties and to an improved water retention, this means a longer drying time.

Further advantages of OPTAPIX C types are their plasticizing effect on ceramic bodies and an improved dry breaking strength.

The addition giving optimum results ranges between 0.05 and 1.0 %, and depends on the individual working conditions. They are either milled with the glaze constituents or added as aqueous stock solution. The granulate form improves their water-solubility.

Please note that when using OPTAPIX C types in stock solutions, glazes and/or body slips, anti-bacterial biocide use is strongly recommended. Consequently, the dosage needs to be adapted to the process conditions.

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.
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