



# Carbocel AP4 HD

## Chemical description

Sodium salt of carboxymethyl cellulose

## Main use

Binder and thickening agent for glazes and engobes

## Typical values

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Appearance at 20°C: Powder

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pH (1% solution): 6 - 9.5

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Viscosity (1% solution, Brookfield LVT @ 25°C, 30 rpm):  
1500 - 2500 cP

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Moisture at the packaging: max. 10%

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## Properties

CARBOCEL AP4 HD is a purified grade high viscosity Carboxymethyl cellulose (CMC).

CARBOCEL AP4 HD is suitable as binder and rheology modifier for engobes and glaze slips for the ceramic industry.

CARBOCEL AP4 HD is a easy dispersible CMC.

Its features are the same of the traditional CARBOCEL AP4 HD.

Dispersibility and solubility of CARBOCEL AP4 HD has been improved thanks to a peculiar industrial process.

By this way also the addition of CMC in powder form directly into the glaze gives very good results in terms of reduction of clots formation, glaze homogeneity and sieving time.

## Applications

### **Sanitaryware**

The addition of CARBOCEL AP4 HD can be done in different ways according to glaze feature, plant equipments and organisation and habits:

- Total or partial addition in powder form directly into the ball mill. To reduce grinding time, it is also possible to add it only in the last hour of grinding.

- Addition into the glaze slip unloaded from the mill is very often done with a predispersed paste composed by 4 - 6 parts of CARBOCEL AP4 HD and 96 - 94 parts of water, obtained through a high speed stirrer (standard mixing time: 5-10 minutes). This paste is then kept at rest for 12-24 hours before addition. The addition to the glaze slip requires a "high speed" stirring, and a time between 20 minutes and 1 hour.

- Addition of CARBOCEL AP4 HD in powder form directly into the glaze.

The use of an antibacterial agent (i.e. Carbosan from Lamberti) is always strongly recommended.

## Storage and handling

CARBOCEL AP4 HD is stable to prolonged storage under conditions where extreme moisture does not occur. The shelf life is at least twelve months if this condition is observed.

## Packaging

25 KGs five-ply multiwall paper bag having two plies coated with polyethylene.

## Material safety

Consult the Safety Data Sheet