



Tixolam AM 04

Chemical description

Natural polimer.

Main use

Rheology modifier and binder for ceramic glazes.

Typical values

Appearance: Free flowing powder

pH (1% sol, 1% KCl): 6 - 8

Viscosity (1% sol, 1% KCl) Brookfield RVT @ 20 °C, 20 rpm): 1200 - 1800 cPs

Product properties

TIXOLAM AM 04 has been developed to meet white-ware glazing requirements:

- short grinding time;
- short unloading from the mill and sieving time;
- no settling to avoid glazes sedimentation in tanks and reservoirs;
- long shelf life of glaze-slips;
- high flow capacity of spray guns;
- rheological behaviour suitable for the application on vertical or sloping surfaces, avoiding dropping and straining problems;
- very short drying time, compatible with high speed "robot" glazing systems;
- good texture and even surface;
- homogeneous coating of surfaces;
- good binding action avoiding crawling, excessive release of dust, cracks and other defects

TIXOLAM AM 04 is based on Xanthan Gum, a carbohydrate biopolymer derived from the culture of the bacterium *Xanthomonas Campestris*.

TIXOLAM AM 04 imparts high viscosity at low concentration and plastic rheological behaviour (presence of yield point) with exceptionally good anti-settling properties; besides, viscosity is practically not influenced by variation of temperature and pH. The heat resistance is quite good.

This sum of features make TIXOLAM AM 04 able to maintain a better viscosity control over time and specially suitable for spray glazing on sloped or vertical

surfaces, proper of sanitary-ware, table-ware, extruded tiles.

TIXOLAM AM 04 can be used alone or together with other binders/rheology modifiers (i.e. Carbocel and other Tixolam) according to the required rheological parameters.

The blend with low viscosity or medium viscosity CMC results technically advantageous and particularly cost-effective.

Applications

TIXOLAM AM 04 is usually added into the glaze in quantity of 0.1 - 0.35 % (on solids).

The addition of TIXOLAM AM 04 can be done in different ways according to glaze feature, plant 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 TIXOLAM AM 04 only in the last hour of grinding.
- Addition of TIXOLAM AM 04 into the glaze slip unloaded from the mill is very often done with a predisposed paste composed by 4 - 8 parts of Tixolam AM 04 and 96 - 92 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 TIXOLAM AM 04 in powder form directly into the glaze which has to be made carefully to get a complete and homogeneous dispersion of the binder without formation of clots.

Take also into consideration that glaze slips might show thinning or thickening behaviour in the first hours after addition of TIXOLAM AM 04.

Then we recommend a resting time to reach stable rheological parameters of the glaze before its use. The

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proper resting time depends on local working conditions and has to be checked on site.

TIXOLAM AM 04, due to its chemical composition, can be prone to bacterial attacks that can cause sudden changes of rheological characteristics of the glaze; then we recommend the use of antibacterial agents (i.e Carbosan from Lamberti) during glaze preparation to improve its consistency.

Storage and handling

TIXOLAM AM 04 is stable to prolonged storage under condition where extreme moisture does not occur. The shelf life is at least twelve months if this condition is observed.

Packaging

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

Material safety

Consult the Safety Data Sheet