Notes on Processing Pigments

Zeomic can be added to water based, organic solvent based, or powdered pigments.

Zeomic can be used in such various resin pigments as acrylic, urethane, epoxy, silicon, phenol, or polyester pigments, as well as in inks and printing materials.

Dispersion Properties

The antimicrobial mechanism in Zeomic comes from the antibacterial action caused by direct contact between the Zeomic particles and bacteria. Thus, Zeomic particles must be evenly distributed to obtain a good antimicrobial effect. Zeomic is a fine particle averaging 2 - 3 μm in size. If Zeomic clumps together, it may be poorly dispersed. Therefore, precaution is required during processing so that an even dispersion is obtained without any aggregation. To obtain even distribution of Zeomic, please refer to the following two methods:

(1) Serial Dilution

Disperse Zeomic in a low viscosity liquid (water or various solvents, etc.) that can be used for treating processed fiber in advance, and then add this disperse solution to the target treatment material so as to attain a prescribed concentration level.

(2) Physical Dispersion

Zeomic can be dispersed with physical force by using a kneading machine with a high shear force, a Banbury mixer, or a roll-mixer.

* Please consult with our sales specialists for Zeomic pre-dispersed in water products.
The pre-dispersed Zeomic water suspension (Zeomic slurry) has Zeomic powder suspended in water that has undergone anti-sedimentation treatment and first-order dispersion. Therefore, it is easy to use in coating processes.

Sedimentation

With a specific gravity of 2, Zeomic is a relatively heavy substance in comparison with water and various solvents. Sedimentation occurs in low viscosity liquids and will possibly accumulate in the bottom of a container when stored undisturbed. If the Zeomic solution with its sedimentation undisturbed is applied directly to a surface, the distribution of the Zeomic application will be uneven. To prevent sedimentation, please refer to the following two methods:

(1) Remixing Prior to Use
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(2) Adding a Thickener or Dispersant

Zeomic