

MULTIFEX-MM[®] Uncoated

Ultrafine Precipitated Calcium Carbonate

Ultrafine PCC Products:

MULTIFEX-MM[®] PCC (Precipitated Calcium Carbonate) is one product in a family of ultrafine calcium carbonates that have been developed for use in sealants, adhesives, plastics, rubber, inks and other high performance applications. Specialty Minerals' ultrafine PCC products range from 0.07 to 0.15 microns in average particle size. Most grades are surface treated using fatty acid chemistry to improve dispersibility and compatibility in polymers and elastomers. One of the ultrafine products, MULTIFEX-MM[®] PCC, is uncoated.

Specialty Minerals manufactures its coated ultrafine PCCs at its plants in Adams, MA and Brookhaven, MS, and its uncoated ultrafine PCC at its Lifford plant in Kings Norton, Birmingham, U.K. All are made using stringent quality assurance procedures and good manufacturing practices.

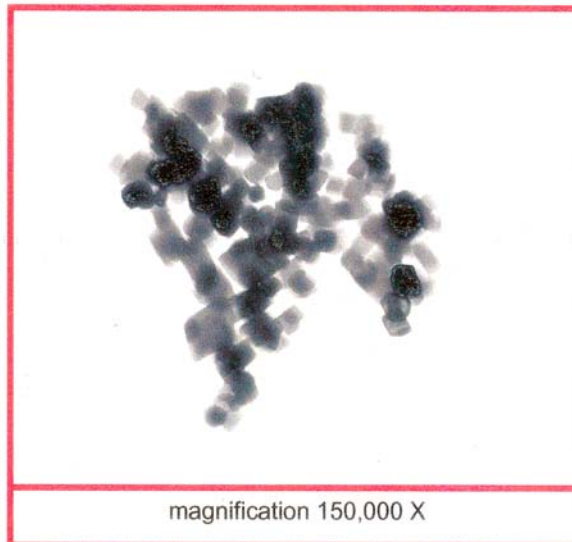
MULTIFEX-MM[®] PCC:

MULTIFEX-MM[®] PCC is a 0.07 micron uncoated calcite particle, rhombohedral in shape. The extremely small particle size results in high surface area, but only moderate oil absorption. MULTIFEX-MM[®] PCC builds true thixotropic rheology in filled systems, and contributes to polymer reinforcement. It is compatible with both aqueous and non-aqueous systems.

Characteristics:

- Finest particle size
- High surface area
- Moderate oil absorption
- Uniform particles
- Narrow particle size distribution
- Uncoated
- Hydrophilic
- Suspends well, minimizing settling
- Low abrasion
- Builds thixotropic structure in filled systems
- Adds polymer reinforcement

Transmission Electron Micrograph:



Applications:

The high surface area and rheological structure-building ability of MULTIFEX-MM[®] PCC makes it a versatile functional filler in many different applications. Its hydrophilic nature makes it particularly suitable for water-based products, but it is also compatible with many polymers and organic solvents.

Some of the uses for MULTIFEX-MM[®] PCC are:

- Sealant rheology control
 - Butyls, plastisols, polysulfides, and other polymer types
- Adhesive viscosity and sag build
 - Solvent- and water-borne systems
- Unsaturated polyester rheology and filling
 - Gel coats, laminating resins, BMC, and SMC
- Gravure ink low abrasion filler
- Silk screen PVC plastisol ink flow control
- Lubricating grease thickener and extreme pressure additive
- Rubber reinforcement
- Natural rubber detackification in thin film products
- Nucleating agent in emulsion polymerization
- Carrier for catalysts, peroxides, fragrances
- Powder flow control additive

