

Rockwood Additives Limited

Monday, 1st October 12

Industrial Overview, Latest Developments and Future Prospects for -Natural and Synthetic Clays

Rockwood Additives is a division of Rockwood Specialities Inc, (www.rocksp.com) We are a global manufacturer of speciality clay materials with a business based upon the physical and chemical modification of clays to develop a range of performance properties. We are also a manufacture of synthetic layered materials, an area in which we have been a global leader for more than 30 years.

The objective of my presentation will be to describe something of our recent work in the areas of both natural and synthetic clays.

I will describe how clays materials are modified to enhance specific performance requirements with an emphasis on what is practically and commercially viable on an industrial scale. I will describe where these modifications currently find applications but also where we believe new opportunities exist.

Areas of current activity which may be of interest or relevance to the meeting are summarised as follows.

- Carriers for carrying, protection and delivery of adsorbed actives. Control mechanisms are hydrophobic/hydrophilic balance, pore size and ion exchange
- Selective adsorbents using the same control mechanisms. Supports in catalysis and biocatalysis
- Rheology control in aqueous systems as low carbon alternatives to petro-chemically derived polymers and the synergistic benefits obtained by their use in combination with natural polymers.
- Stabilisation of surfactantless emulsions using nanoparticles for use in formulated products..
- Modification of synthetic clays to modify their hydrophilic/hydrophobic properties when applied as films to a surface.
- Low viscosity liquid dispersions