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REPRINT

SPECIAL REPORT

20 Microns at European Coating Show 2019

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20 Microns at European Coating Show 2019

20 Microns Ltd, a renowned Global manufacturing company for ultrafine industrial minerals and specialty chemicals for vast applications, has currently participated at European Coating Show Exhibition and was led by Mr. C. S. Parikh, CMD & Mr. Atil Parikh, MD and his team members from 19th – 21st March, 2019 held in Germany. More than 200 professional paint manufacturers and technologists from worldwide visited their booth as also the technical presentation by Dr. Anil Bansal, GM-Technical.

After giving a warm welcome to all the attendees. Dr. Anil Bansal spoke impressively with enthusiasm on the topic “High Performance mineral opacifier for coatings.” He started with an introduction to opacifier and its different types. Opacifier is a substance added to make the material as an opaque system in paint film application. He emphasized “Titanium Dioxide (TiO₂) to be one of the most significant and cost inflation raw material used as white pigment in coatings. But due to its high reflective index at 2.7 thereby imparting whiteness, brightness and opacity properties, it is difficult to replace TiO₂ completely”. He then gradually briefed about 20 Microns mineral based opacifiers which are explained below to partial substitute TiO₂ for cost reduction while retaining or enhancing specific properties such as whiteness, brightness, opacity, dispersivity, gloss, viscosity etc.



LC pigment is a remarkable breakthrough engineered pigmentary product from 20 Micron used as white pigment opacifier in the paint and coatings. TiO₂ encapsulate with calcium carbonate resulting refractive index around 2.1 which is slightly lower than TiO₂ refractive index. It comprises of two grades that are LC 460 for water-based system and LC 470 for solvent-based system.

In LC 460 Pigment, from 20% - 100% of TiO₂ can be replaced in the low to high PVC water based paints according to specific properties such as gloss and opacity. In LC 470 Pigment, from 15% - 50% of TiO₂ can be replaced without affecting optical and rheological properties according to applications in coil coatings, aerospace, road markings and primer undercoats. The key benefits of using LC 460 Pigment for water-based system and LC 470 for solvent-based system are as follows:

- Opacity with high gloss
- Resistance to yellowing
- Excellent dispersibility with finish coverage
- Excellent whiteness and brightness
- Significantly reduces carbon footprint
- Reduction in cost formulation

Engineered Kaolin (Aluminum Silicate) is an inspiring innovation known for whiteness, softness, non-abrasiveness and chemical stability. It acts as a spacer when dispersed with TiO₂ that enhances light scattering efficiency and opacity due to the difference in refractive indices. It comprises of three grades that are Pearl gloss 90, Hypermax 0425 and Hyperciliate.





Pearlgloss 90 is Ultrafine Hydrous Kaolin. It is used universally to extend both solvent and water-based with high gloss. Essential benefits in glossy paints are as follows:

- High brightness with uniform ultrafine particle size
- Excellent opacity while retaining high gloss
- Improved rheological properties especially sag resistance and storage stability
- TiO₂ replacement up to 10% and 15% in solvent and water based respectively
- Cost efficient

Hypermax 0425 is High Opacity Engineered Calcined Kaolin. It is used for dry hiding and better scrub resistance in medium to high PVC architectural and solvent borne coatings. Due to high pore volume, dry opacity enhances lead to value additions of the product. The key benefits of using Hypermax 0425 are as follows:

- High brightness, whiteness and reducing strength
- Good Burnish Resistance
- TiO₂ replacement up to 40%

Hypercilite is Flash Calcined Kaolin with low specific gravity. It is used for high wet/dry opacity and reducing strength in interior and exterior paints as well as coatings application.

The advantages of using Hypercilite in emulsion paints are as follows:

- Excellent wet Opacity with reduction in paint specific gravity.
- High whiteness and low yellowness
- Excellent scrub resistance
- Cost reduction due to TiO₂ replacement up to 25%

Glowtox is a cost effective surface treated rutile Titanium Dioxide. It is available in two colours that is Buff and Grey. It comprises of three grades:

- Glowtox 50/50 Plus- Buff colour and
- Glowtox BLK- Grey colour.

Using Glowtox, white TiO₂ as well as expensive colour pigment can be replaced partially or completely. It offers comparable characteristic performance as white Titanium dioxide in opacity and gloss. Cost reduction from 10 % to 35% depending upon the formulation.

Micronlite SPV is initiative next generation introduction to nanoparticles (average particle size is less than 100nm), a solution to compact various problems. It is surface modified nano calcium carbonate with characteristic properties of high surface area, low abrasion, uniform disperse particles and moderate oil absorption. It plays excellent role as opacifier and thixotropic agent in paints and coating with properties such as

- High gloss
- Anti-sag
- Controlled rheology
- Excellent Thixotropy

Finally, he concluded mineral based opacifier products to provide TiO₂ savings from 15% to 100% that drastically changes the issue of cost inflation.

The topics presented were well acknowledged in addition to fantastic interactive time at booth with global visitors. ■

Information on your new products, equipments and processes

You are invited to submit information about new products, equipments, and processes, developed and offered by you to the Indian market. Such writeups are entertained for publication without any cost.

Don't miss this opportunity to promote your new products.