

Evonik: A new reference work for UV matting

March 19, 2013

In order to support our customers and keep them as informed as possible, Evonik Industries is now offering a new compendium entitled "Matting for UV-Curing Paints." The compendium provides a comprehensible look, both in overview form and in detail, at the unique challenges involved in UV curing for matte paints, and offers valuable advice.

Contact person specialized press

Frank Gmach
Inorganic Materials
Phone: +49 6181 59-13588
Fax: +49 6181 59-713588
frank.gmach@evonik.com

Traditional paint systems with volatile components, such as water-based and solvent-based UV-curing paints, can be readily given a matte finish through evaporation of the solvent (vertical film shrinkage). By contrast, creating a matte finish is difficult for solvent-free paints and for paints that are cured up to 100% by UV radiation.

The new compendium shows readers how selecting suitable matting agents, using sophisticated paint formulations, and selectively controlling curing and system parameters can all have a significant impact on the matte grade of a coating.

What difficulties do paint formulators face?

In order to achieve a satisfactory matte finish, they have to compensate for insufficient vertical film shrinkage by employing suitable mechanisms for roughening the paint surface. Evonik experts describe solutions such as the option of selecting a matting agent particle size that corresponds to the thickness of the paint layer. An alternate approach is to magnify the polymerization shrinkage of the paint, which is caused by free radical polymerization of the double bonds in the acrylate oligomers and monomers. It is important here to make sure that the matting agent matrix, which consists of silica particles that are evenly distributed within the liquid paint, does not shrink as much upon curing as the surrounding binder matrix.

Evonik Industries AG
Rellinghauser Strasse 1-11
45128 Essen
www.evonik.com

Chairman of the Supervisory Board
Dr. Werner Müller
Executive Board
Dr. Klaus Engel, Chairman
Dr. Wolfgang Colberg,
Dr. Thomas Haerberle, Thomas Wessel,
Patrik Wohlhauser, Dr. Dahai Yu

Registered Office: Essen
Register Court: Essen Local Court
Commercial Registry B 19474
VAT ID no. DE 811160003

Using tables and many straightforward diagrams and illustrations, the matting agent experts have provided paint formulators with a reference work that will meet the highest standards.

The Silica Business Line of the Evonik Industries Inorganic Materials Business Unit sells products for the coatings market, primarily from two product lines: AEROSIL® and ACEMATT®. The AEROSIL® fumed oxides family contains a variety of different additives for paint formulations, while the ACEMATT® product portfolio comprises a broad range of silica-based matting agents.

Company information

Evonik, the creative industrial group from Germany, is one of the world leaders in specialty chemicals. Profitable growth and a sustained increase in the value of the company form the heart of Evonik's corporate strategy. Its activities focus on the key megatrends health, nutrition, resource efficiency and globalization. Evonik benefits specifically from its innovative prowess and integrated technology platforms.

Evonik is active in over 100 countries around the world. In fiscal 2012 more than 33,000 employees generated sales of around €13.6 billion and an operating profit (adjusted EBITDA) of about €2.6 billion.

Disclaimer

In so far as forecasts or expectations are expressed in this press release or where our statements concern the future, these forecasts, expectations or statements may involve known or unknown risks and uncertainties. Actual results or developments may vary, depending on changes in the operating environment. Neither Evonik Industries AG nor its group companies assume an obligation to update the forecasts, expectations or statements contained in this release.