

No more sedimentation: Additives for next generation of slurries

March 8, 2019

Slurries of pigments like titanium dioxide or fillers are essential intermediate product in the production of, for example, architectural paints. Evonik Resource Efficiency GmbH introduces a novel technology for dispersing additives that effectively prevents sedimentation during storage or transportation of slurries. As a result, the expensive and time-consuming cleaning and maintenance procedures of tanks can be avoided. Furthermore, as sedimentation no longer occurs, no pigment is lost and, thus, the formulation of the slurry can be calculated more easily.

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For efficient handling, slurries should have high pigment loading and low viscosity; however, this low viscosity promotes the formation of sediments and syneresis during storage or transportation. Therefore, in addition to particle stabilization, rheology is key for good performance. The next generation of novel dispersing additives shows a unique rheological behavior with a significant yield point, very strong shear thinning, and extremely fast recovery when no shear force is applied.

Thanks to the unique combination of dispersing and rheological properties, the new additives are a 2-in-1 solution for formulators of slurries. Numerous tests have been run on our High Throughput Equipment experimentation plant by optimizing molecule geometries and process parameters. The test results confirm an excellent compatibility with common binders, high hiding power, as well as good wet scrub resistance. According to these tests, sedimentation was avoided by 100%.

Evonik's "anti-sedimentation-additives" are still under development and are not yet available. To learn more about this product innovation, please listen to the presentation of Ellen Reuter at the European Coatings Show congress in Nuremberg, March 18th at 3:30 p.m.

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Picture 1: façade coatings

Please visit us at the European Coatings Show, March 19 – 21, 2019 in Nuremberg: Hall 7A, Booth 323.

**For more information please visit our website
www.coating-additives.com**

Company information

Evonik is one of the world leaders in specialty chemicals. The focus on more specialty businesses, customer-oriented innovative prowess and a trustful and performance-oriented corporate culture form the heart of Evonik's corporate strategy. They are the lever for profitable growth and a sustained increase in the value of the company. Evonik benefits specifically from its customer proximity and leading market positions. Evonik is active in over 100 countries around the world with more than 36,000 employees. In fiscal 2018, the enterprise generated sales of €15 billion and an operating profit (adjusted EBITDA) of €2.6 billion.

About Resource Efficiency

The Resource Efficiency segment is led by Evonik Resource Efficiency GmbH and produces high performance materials and specialty additives for environmentally friendly as well as energy-efficient systems to the automotive, paints & coatings, adhesives, construction, and many other industries. This segment employed about 10,000 employees, and generated sales of around €5.7 billion in 2018.

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