Press release

Structurally modified, hydrophilic silica improves the anti-fouling properties of coatings based on cuprous oxide

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Structurally modified, hydrophilic AEROSIL® improves the anti-fouling properties and product life of anti-fouling coatings. Customers use the product in formulations with cuprous oxide (Cu_2O) to take advantage of the resulting synergies.

VP 4200 is a development product that, as an active extender with cuprous oxide, exhibits effective anti-fouling properties while lowering the amount of Cu_2O needed in the coating formulation. In terms of product function, the structural modification process significantly increases bulk density, effectively reducing the thickening effect of AEROSIL® and making higher loading capacities possible. Not only does the high solids content help anchor the cuprous oxide — significant reinforcement and durability of the film also helps make the cuprous oxide available for longer periods of time. The product works in spray applications just as before.

When VP 4200 is added at concentrations exceeding 10 percent (relative to the total formulation), effective anti-fouling effects have been demonstrated at much lower concentrations of Cu_2O (roughly 6 percent, also relative to the total formulation). In addition, a novel particle design based on hydrophobic, structurally modified VP 4200 is more effective in formulations than hydrophobically modified versions.

Structurally modified AEROSIL® grades were introduced over 10 years ago as a way of improving scratch resistance and mechanical durability of products in the coatings, adhesives, and sealants industries. The new developments are opening the door to novel applications that represent environmentally sustainable improvements to anti-fouling effects in maritime environments.

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Caption:
The new product, as an active extender with cuprous oxide, exhibits effective anti-fouling properties.

Company information
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Evonik Industries has been producing specialty chemical products in the Greater China region (Mainland China, Hong Kong and Taiwan) since the late 1970's; with wide-ranging trading relations already in place prior to this in the region. Evonik regards Greater China as one of the driving forces of the global economy and we consequently endeavor to grow our business in the region. The company now has around 3,000 employees in the Greater China region, the regional sales reached about €1.3 billion in 2016.

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