

New additive TEGO® Powder Aid D01 improves powder coating formulations in many ways

- TEGO® Powder Aid D01 reduces the melt viscosity of powder coating formulations
- Supports gloss development and DOI
- Versatile use for systems with high PVC (pigment-volume-concentration)

Essen, Germany. Evonik's Coating Additives Business Line has developed a new, multifunctional polymer additive for powder coating formulations: TEGO® Powder Aid D01 makes the formulation easier to disperse during extrusion by promoting pigment wetting and effectively reducing melt viscosity.

The lower melt viscosity also leads to better degassing, which aids flow and leveling as the formulation cures and prevents pinholes in the coating. Thus, the new additive optimizes gloss development and ensures better DOI (Distinctness of Image) on the coating surface.

One additive, many functions

Another plus point of TEGO® Powder Aid D01 is its particularly versatile applicability in formulations with inorganic fillers and pigments, along with organic pigments including carbon black. "Our new product thus offers a wide range of benefits for formulators who desire one multifunctional additive for various powder coating systems," says Maximilian Morin, head of the Industrial & Transportation Coatings market segment. "TEGO® Powder Aid D01 generates a large effect in small amounts and acts as a synergist with other additives."

Reduction of melt viscosity

TEGO® Powder Aid D01 also plays to its strengths in HAA curing systems for powder coatings with water being formed as a by-product. "The challenge during crosslinking is, that the water needs to escape from the system. This can result in pinholes or

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small craters in the film," explains Bernhard Resch, Scientist in Market Segment Industrial & Transportation Coatings.

To avoid this, the low melt viscosity is particularly important: homogenization of the ingredients and leveling of the surface is improved. "TEGO® Powder Aid D01 prevents pinholes by increasing the degassing threshold and enables the application of thicker coating films," says Resch.

Durable, recoatable coatings

Powder coatings containing TEGO® Powder Aid D01 also show comparable resistance to weathering, making this additive suitable for use in exterior applications. So-called overbake yellowing, even at elevated temperatures, is manageable. The new additive imparts these positive properties to powder coating formulations without containing surface-active waxes. As a result, overcoating is also possible without any problems.

"TEGO® Powder Aid D01 is a new addition to the additive portfolio from Evonik's Coating Additives Business Line, intended to be extruded into powder coating formulations," says Resch.

Company information

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About Specialty Additives

The Specialty Additives division combines the businesses of versatile additives and high-performance crosslinkers. They make end products more valuable, more durable, save more energy and simply better. As formulation experts in fast growing markets such as coatings, mobility, infrastructure and consumer goods, Specialty Additives combines a small amount with a big effect. With its 3,700 employees the division generated sales of €3.71 billion in 2021.

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