

TEGO® Therm makes insulation coatings more efficient

- Improves insulation properties and durability
- Spray application makes it simple and cost-effective
- Increases occupational safety and energy efficiency

Essen, Germany. Evonik has developed a new line of tailor-made feedstocks, TEGO® Therm, that substantially improve the performance of thermal insulation coatings (TICs). The new product range includes two microporous silica-based granules, TEGO® Therm HPG 4000 and TEGO® Therm HPG 6806, as well as a heat-resistant, silicone-based binder, TEGO® Therm L 300.

High-performance and sustainable

The three new products from Evonik's Business Line Coating Additives are characterized by excellent insulation properties & heat resistance, even at temperatures of up to 250 degrees Celsius. This provides the following performance and sustainability benefits: insulation coatings based on TEGO® Therm products substantially reduce energy loss, and they also aid occupational health and safety, because they can significantly reduce the temperature of hot surfaces (safe touch). Insulation coatings also provide protection against moisture penetration and therefore corrosion under insulation (CUI). This significantly increases the service lives of coated items.

One target application for this new generation of feedstocks is the technical insulation of pipelines, tanks or various other components in industrial plants. A first product based on TEGO® Therm granules is already commercially available and can be applied for safe touch and corrosion prevention purposes. Evonik wants to use this product range in the future to provide thermal insulation solutions to its customers in the construction and vehicle manufacturing sectors.

Another benefit of TEGO® Therm-based insulation coatings is that they are easy to apply. "Conventional insulation systems, such as mineral wool, are often difficult and time-consuming to apply –

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appliances and components with complex geometries in particular are often inadequately insulated,” says Dr. Niko Haberkorn, Head of Thermal Managing Coatings at Evonik Coating Additives. As a result, non-insulated, hot surfaces increase energy loss and they also need to be protected against accidental contact. In contrast, coatings incorporating products from the TEGO® Therm line can be easily applied just by spraying. “That is even feasible to some extent during ongoing operations. This avoids equipment downtimes and saves time and money,” says Haberkorn.

The new TEGO® Therm products in detail

The TEGO® Therm HPG 4000 granules, featuring larger particles of around 300 micrometers, is characterized by particularly low thermal conductivity at high temperatures. TEGO® Therm HPG 6806, on the other hand, features finer particles (around 30 micrometers) and enables higher fill levels and ensures that coatings have smooth surfaces. Both granules are highly insulation-effective, offer mechanical stability and are hydrophobic. Their inorganic structure also makes them non-combustible.

The water-based binder TEGO® Therm L 300 can withstand temperatures of up to 250 degrees Celsius, while standard binders for TICs can only withstand temperatures no higher than 160 degrees. Given its excellent adhesion to various substrates, TEGO® Therm L 300 ensures particularly resilient coatings.

Products from the TEGO® Therm line can be combined with one another and with other product lines, depending on the specific application.

Evonik’s coating experts provide their customers with sample formulations incorporating the two granulates for different applications. “We recommend combining the granulates with the heat-resistant binder from the TEGO® Therm line, especially for applications involving very high temperatures,” says Markus Hallack, Head of Applied Research for Thermal Managing Coatings.

Evonik targets its high-performance TEGO® Therm product line at formulators, who wish to change their systems, in order to enhance their products and improve the long-term reliability of their coatings. Customers from the coating industry that want to enter the thermal insulation market for the first time also benefit because TEGO® Therm enables them to work sustainably, safely and efficiently right from the word go. The products from this line are available worldwide, effective immediately.

You can obtain further information at www.coating-additives.com.

Company information

Evonik is one of the world leaders in specialty chemicals. The company is active in more than 100 countries around the world and generated sales of €15 billion and an operating profit (adjusted EBITDA) of €2.38 billion in 2021. Evonik goes far beyond chemistry to create innovative, profitable and sustainable solutions for customers. About 33,000 employees work together for a common purpose: We want to improve life today and tomorrow.

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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