Enersens SAS

Bourgoin-Jallieu, France | www.enersens.fr

Enersens is a producer of silica aerogel materials that focuses on high-performance insulation applications. Enersens' key target end-markets are 1) Building and Construction 2) Electric Vehicles and Electronics, addressed thanks to its versatile products described below.

The company's main products are 1) hydrophobic silica aerogel granules and powders with sizes fully adapted to customers' requirements sold under the tradename Kwark®, and 2) the world's most efficient insulating silica aerogel composite blankets and panels sold under the tradename Skogar®. All Enersens products are produced through proprietary patented processes and cost-efficient ambient-pressure drying.

Focus on Kwark®

Enersens describes its Kwark® silica aerogel granules as hydrophobic with breathable character and very low density, enabling them to be incorporated into a variety of products and systems so they are shifting from thermally conductive materials (plasters, renders, mortars) to insulating ones while simultaneously providing lightweighting benefits and long service life. The company's Kwark® powder products are identical in composition, but with smaller particle sizes, and are designed for coatings, paints, catalysis, and cosmetics applications. Enersens highlights the benefits of its products (Figure 1) as essentially high-performance, environment-friendly mineral alternatives to other insulation materials (especially petroleum-based ones).

An IR opacified version of Kwark® has just been introduced on the market for double wall heat shields and exhibits a 25% improved thermal conductivity at high temperatures.

Figure 1. Images of Kwark® brand silica aerogel granulates and powders produced by Enersens. Right to left: detail of mm-sized aerogel granules; Kwark® GS granulate; Kwark® XP500 powder.

Focus on Skogar®

In addition to particles, the company states its silica-aerogel-based Skogar® superinsulating blankets and panels are the most efficient insulating panels on the market, providing a thermal conductivity as low as 12 mW/m.K - three times lower than conventional insulating materials (Figure 2). Enersens states that their Skogar® panels

enable significant space savings as they offer better insulating performance in a much thinner profile compared to traditional insulation materials, are light and easy to handle, and have excellent mechanical and acoustic properties. Skogar® panels are reinforced with different fibres and are non-flammable, meeting European fire rating standards for categories A1, A2-s1,d0 and B1-s1,d0 depending on fibre composition, (i.e., non-combustible, low or very low contribution to fire with very low smoke production and does not produce incendiary particles or droplets). Additionally, Skogar® panels have a high vapor permeability and pass European standards for off-gassing of VOCs for building and construction applications.

Figure 2. Images of Skogar aerogel composite panels produced by Enersens. Right to left: Skogar® UF; Skogar® NGF; Skogar® Recycled PET.