



Picture of hydrophobic Pyrogel insulation used in SolaraRay panels

## **DUCOTERRA SOLARAY PANEL ADVANCED INSULATION TECHNOLOGY**

Ducoterra's *SolaraRay* infrared radiant heating panels utilize a high-performance advanced type of insulation, originally developed by NASA, called aerogel. Aerogel is a lightweight solid derived from gel in which the liquid component of the gel has been replaced with air. The process of creating aerogel results in a material with extremely low density and the lowest thermal conductivity of any solid. These remarkable properties make aerogel one of the world's most efficient insulating materials. Aerogel insulation is up to five times more effective than traditional insulation materials and using aerogel improves both the efficiency and aesthetics of the *SolaraRay* panels.

In the *SolaraRay* panels, a variation of aerogel called Pyrogel XTE is used: a flexible aerogel composite designed for high-temperature applications (up to 1200°F), with thermal performance two to eight times greater than other high-temperature insulating materials. With its extremely low thermal conductivity, Pyrogel XTE is up to 75% thinner than competing materials. Not only is Pyrogel XTE a superior insulating material and highly heat-resistant, it also is extremely hydrophobic and breathable ensuring long-lasting water resistance in both the insulation and the underlying components of the *SolaraRay* panels.

Part of the product innovation at Ducoterra is the simplified and rapid assembly process used for our panels. Additionally, the heating element is engineered from NiCr60 wire for maximum reliability and longevity. Overall, Ducoterra's *SolaraRay* infrared radiant heating panels utilize state of the art engineering and materials to provide the maximum value for your dollar. As a result, our panels operate more efficiently than any other comparable electric infrared heater on the market today.