PRINCETON POLYMER LABORATORIES

Spectrophotometry Testing for Light Absorbance and Transmittance
Testing by Princeton Polymer Laboratory, Union, NJ - www.princeton-polymer.com

Tested: Nansulate® Crystal, Nansulate® HomeProtect Clear Coat and Nansulate® GP coatings.
Tested on: Clear pane glass, tempered glass, and quartz glass. In all cases, they obtained a smooth 7 mil coating (fully cured).

Each sample was kept in tightly sealed containers prior to testing to ensure that no dust or other foreign mater would interfere with the results.

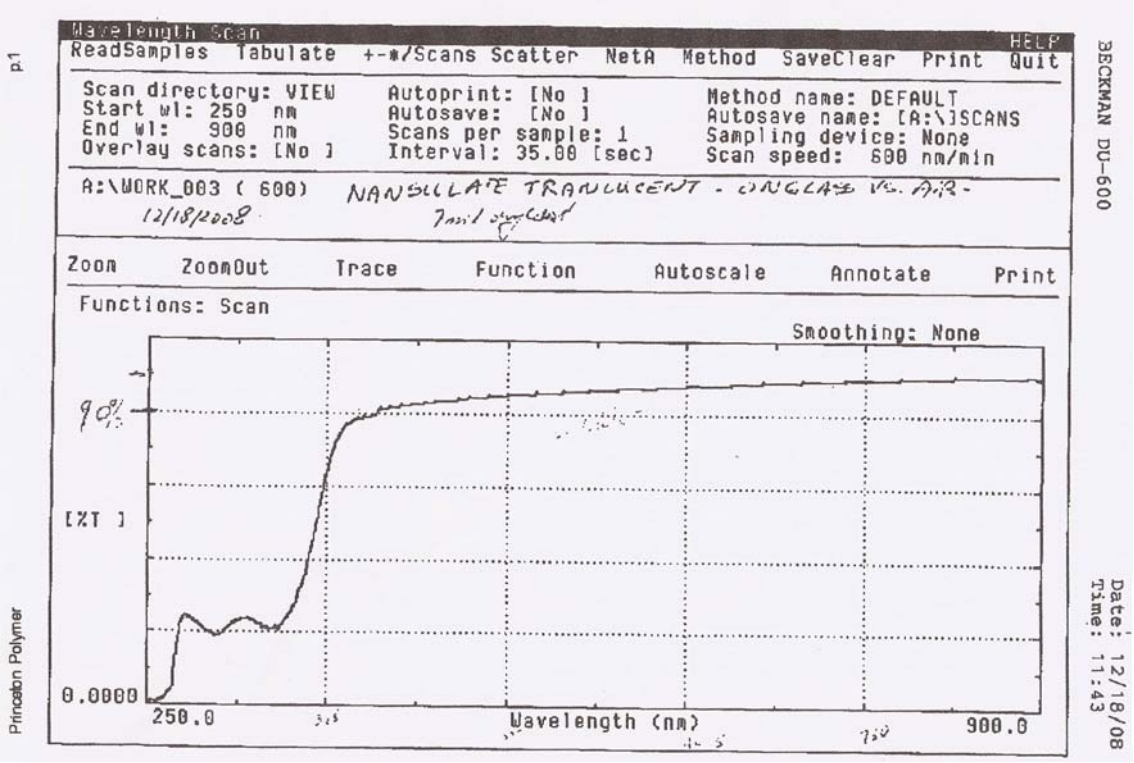
The samples were scanned, using plain glass (or quartz) as control.

The spectra were run on the entire light wavelength, from 250.0 to 900.0 nanometers (nm) . Note, Ultraviolet is in the 260-400 nm range, visible is in the 350 to 750 nm range, and infrared is in the high range.

Most significant is the visible and especially the useful visible range of 400 to 700 nm.
The samples were run on a Beckman DU 600 full scanning UV spectrophotometer.

Results indicate that we have zero interference from the Nansulate® over the entire visible spectrum. 92% transmission is maintained throughout. This is the transmission rate of pane or tempered glass. (see figure 1)

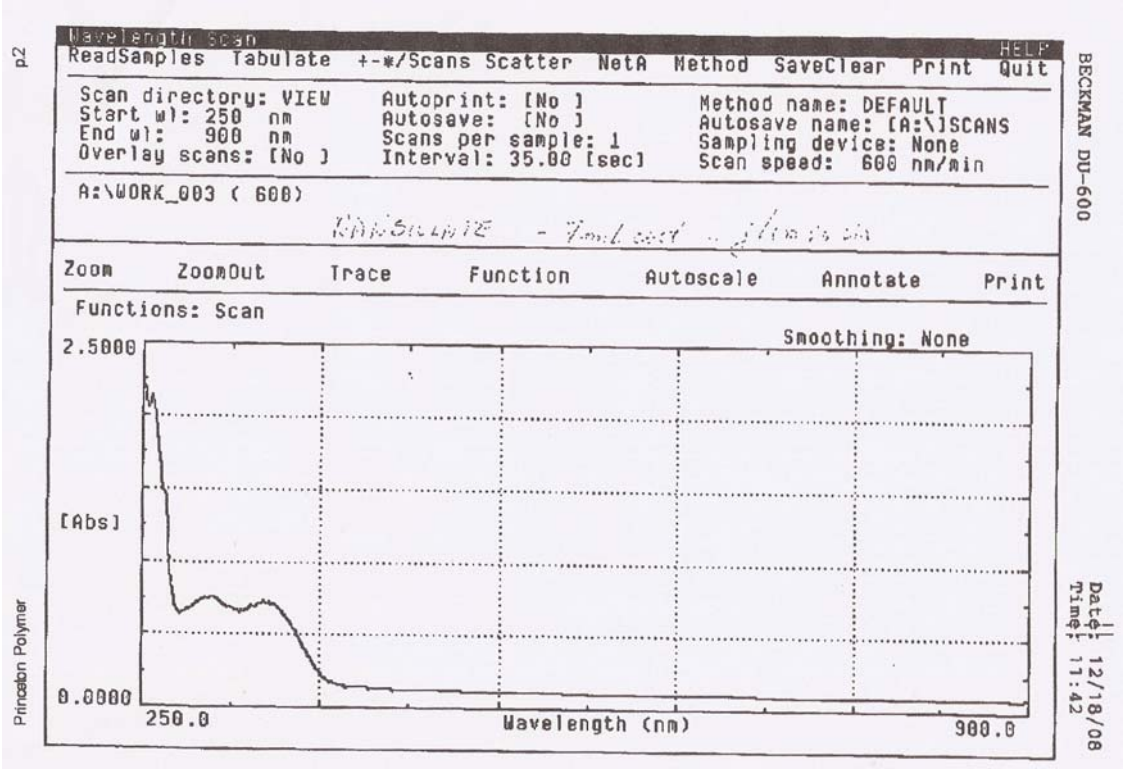
Figure 1:



Graph from Beckman DU-600 shows the percentage of light transmission through Nansulate® coated at 7 mils on glass surface. Readings show in the visible light range that 92% light transmission is maintained.

Another way to look at it is the percentage of absorption, and the corollary holds, in the visible range, Nansulate® does not absorb any light. (see figure 2)

Figure 2:



Graph from Beckman DU-600 shows the percentage of light absorption through Nansulate® coated at 7 mils on glass surface. Readings show in the visible light range light absorption is minimal.

In conclusion, using Nansulate® coatings on the glass surface does not impede any light from passing through. Thus it is a choice coating for thermal insulation (your existing case studies) without any deleterious effects on light transmission.