HEAT GAIN EFFECT – Window Design

AquaSurTech incorporates the most advanced heat reflective pigments available, these minimize the heat gain effects experiences by exposure to the sun. The use of our coatings can reduce the temperature of the surface by as much as 25 F when compared to standard pigment technologies.

However, when coating window profiles with D-200, to minimize heat gain effects, it is always important to consider the venting of the profiles themselves. Venting holes .25'' - .18'' spacer is recommended. Both frames and sashes should have venting on the top of the profile.

Other factors which can contribute to heat build related effects:

- The use of Low E glass, possibly reflecting onto a sill
- Very thin walled profile or snap in components
- Single wall upside profile
- Improper installation not allowing for the increased expansion related to an increase in surface temperature
- Manufacturing tolerances must also account for the possibility of a differential expansion, i.e. a thin component snapped into a large component (high thermal mass) at room temp. This is particularly important for large spans, where the absolute expansion is much larger than over a small distance.
- Lack of reinforcement.
- Injecting insulation into profile reduces cooling effect.

Consult your extruder for any system related questions especially when a product is new. Testing a system under worst case conditions – hottest color, on a hot day, installed at 45 degrees southern exposure, inside a wooden frame structure (not cooled) will simulate the very worst conditions possible.