



[19 captures](#)

8 Sep 2003 - 21 Apr 2024



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**In Floor Radiant Heat**

**March 2002**

**[SUNSHIELD](#)® NON-DETERIORATING** Multi ~ Ceramic Insulation Coating applied as a thermal break under infloor radiant heating.(see NOTES )

Bare Concrete Slab



**SUNSHIELD® applied on slab @ 16 mils WFT \ 8 mils DFT**



**Glue applied to the bottom of the piping rails**



**Piping rails in place**



**Heating tubes placed in rails**



**Concrete skim coat applied over entire system**



**NOTE :** In this particular application the [SUNSHIELD](#)® is completely buried in concrete and consequently only 2 of the 4 ceramics will come into play. The 2 reflective ceramics are ineffective in this type of application because the coating is facing direct contact, low temperature, front side conduction. This will reduce the thermal barrier for [SUNSHIELD](#)® and [SUPERTHERM](#)® as demonstrated by the [ASTM C236](#) - " Steady State Thermal Performance of Building Assemblies by means of a Guarded Hot Box ". A Reflective Paint on the other hand wouldn't work at all in this application and is a further demonstration of the **difference** between a Reflective Paint and an *Insulating Coating*. Additional insulation effectiveness can be achieved by adding more thickness. This is amply demonstrated with our new [HPC® COATING](#) when the surface temperature can be reduced from **1000°F** to only **163°F** with a mere 1" DFT as certified by the [TEMPERATURE REDUCTION CHART - VTEC LABORATORIES](#).

**In an independent test conducted by [JSA Sales](#) a 10°F difference was recorded using [SUNSHIELD](#)®.**

The following is courtesy of Don Pasternak of PRAGMATEK BUILDING SYSTEMS, INC. the distributor for New Jersey. Don is working with Bill Barbera the Vice President of [HVAC Alternatives, Inc.](#) Bill recently ( October 2005 ) applied [SUPERTHERM](#)® Multi ~ Ceramic Insulation Coating as the thermal break under newly installed in floor radiant heating. His results match the results achieved on our projects.

*" I have performed some additional tests on [SUPERTHERM](#)®. Recently I installed radiant on the 2nd floor of my own home.*

*One room I coated the sub-floor with 2 coats [SUPERTHERM](#)® Installed 9" wide sleepers & heat transfer plates with 1/2" pex then Pergo for finished floor.*

*The rest of the rooms was installed using 3/4" Dow Polystyrene with heat transfer plates and pex, simulating the Roth products system for radiant retrofit systems in lieu of the [SUPERTHERM](#)® and plywood.*

*The [SUPERTHERM](#)® room responds twice as fast, with virtually no heat loss*

My Conclusion:

**1 - I had to reduce the flow to that room to prevent fly wheeling and overheating**

**2 - I wish I used [SUPERTHERM](#)® throughout.**

**3 - [SUPERTHERM](#)® is far superior than conventional insulation.**

*[SUPERTHERM](#)® is truly an amazing product. I intend on specifying it in all future energy conservation projects. "*

Regards,  
Bill Barbera