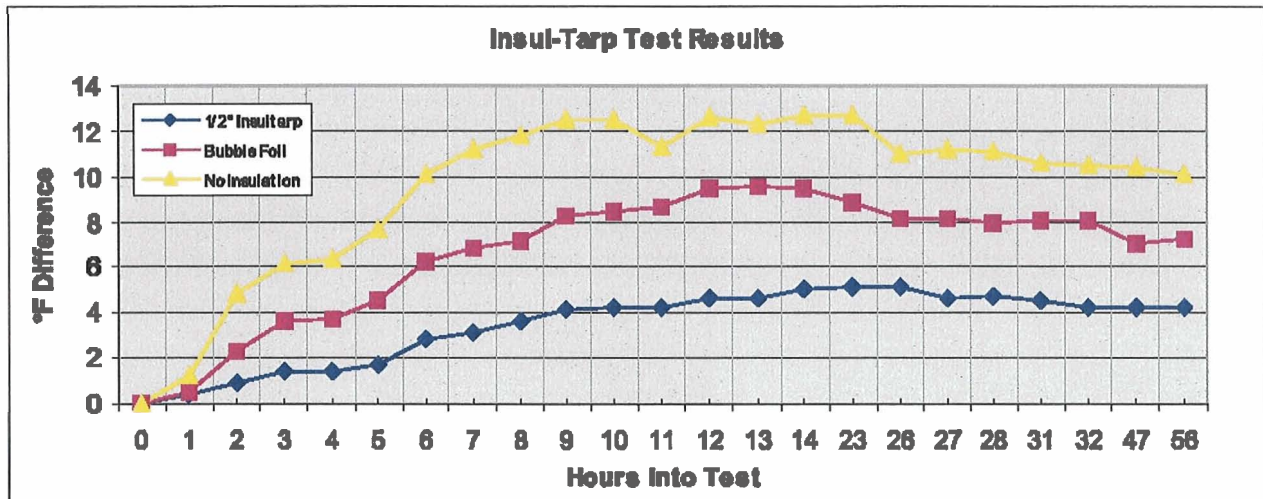


### Insul-Tarp® Lab Test Evaluation 1 Insul-Tarp® vs. Bubble-Foil-Bubble vs. No Insulation

#### Description

Three tests were conducted to evaluate the effectiveness of **Insul-Tarp®** versus another product called Bubble-foil-bubble and also against no insulation. The test consists of a large plastic container 18" deep x 18" wide and 36" long (See figure 1). Temperature thermocouples were inserted into the limestone just beneath the slab and one near the outer surface of the bottom of the container. Continuous heat was applied to the top of the slab while readings from the thermocouples were taken over a period of time. The results of this test are shown in Figure 2. The graph shows the difference in temperature between the upper and lower thermocouple. As you can see after approximately 12 hours, the temperature difference stabilized with the **Insul-Tarp®** with approximately a 150% increase in the differential as compared to the "No Insulation" test.



#### Lab Test Results

TEST	Avg. °F Difference *	Temp. Differential Increase
Insul-Tarp Insulation	4.580	0%
Bubble-Foil-Bubble	8.430	84%
No Insulation	11.380	148%
* After Stabilization		

#### Conclusions:

*Because temperature differential has a linear relationship with heat loss, it is easy to see how the low differential temperature in the 8" of limestone beneath the slab and the **Insul-Tarp®** helps reduce heat loss through the slab to the limestone bedding below. The bubble-foil has a temperature differential nearly twice that of the **Insul-Tarp®** and the No insulation test has a factor of 2.5 times the differential indicating a significantly larger heat loss characteristic than that of **Insul-Tarp®**.*