

# Heat lamp tests of R-0.528 foam panels and Thermilate insulating paint additive



A series of tests were performed using a 100 watt heat lamp positioned 450mm from the exterior of 500mm x 500mm pieces of standard foam home insulation R-0.528 rated panels.

An R-0.528 ½ inch foam panel was painted on one side with one coat of Thermilate Thermal Block Low VOC insulating interior primer. The coverage rate was based on 18 to 20 sq M per Litre of primer. The second panel was left uncoated.

Each panel being tested had a heat flux transducer attached to the backside of the panel. Each panel was exposed to the infrared heat lamp array for 30 minutes by which time the heat flux had stabilized and no increases were occurring.

The exterior surface temperature of the both R-3 panels averaged 41.6 deg C throughout all of the tests. The air temperature during the tests was 25 deg C

The 30 degree temperature differential was used as is specified by a somewhat similar ASTM C-236 test which is used to calculate the “R” value of a material.

The tests were run 6 times and the results of the tests were averaged to get the following results:

## **Uncoated R-0.528 panel:**

Air temp temp.	Flux meter 30 min.	Panel surface temp. 30 min
25 deg C	3.1 mv	41.6 deg C

Calculated Heat Flux = 13.33 BTU hr<sup>2</sup>

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## **R-0.528 panel coated on exterior with Thermilate Thermal Block primer** (heat lamp side):

Air temp temp.	Flux meter 30 min.	Panel surface temp. 30 min
25 deg C	1.9 mv	41.6 deg C

Calculated Heat Flux = 8.17 BTU hr<sup>2</sup>

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## **Test Results:**

The energy savings obtained from the use of Thermilate calculates to an added R-0.306 or a 61% improvement in the energy efficiency of the R-0.528 foam panel.