



# SMART *Brief*

T E C H N I C A L B U L L E T I N

**DATE:** 8, March 2010 **No:** 019- SB-01100308  
**TO:** California Contractors & Distributors **Page** 1 of 1  
**FROM:** Metro Technical Services Division  
**SUBJECT:** **METRO HOT BOX (R-VALUE) TESTING ANALYSIS COMPARED TO TITLE-24**

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## Hot-Box R-Value (thermal resistance) Testing

Two thermal resistance tests were performed using Metro Shake™ installed in two different construction configurations that are common in California. These were Metro Shake™ installed on BATTENS (1X4 Counter-battens & 2X2 Panel Batten Battens) and Metro Shake™ installed BATTEN-LESS (Direct-to-the-Roof-Deck).

## R-Value Testing Results

BATTEN-LESS method (Direct-to-Deck) –	R 2.01
BATTEN method (1X4 & 2X2 Battens) -	R 2.69
<b>Performance Difference</b>	<b>- R 0.68</b>

*(The Roof deck in both tests used construction grade ½" CDX Plywood)*

## Conclusion

The R-Value difference (**R 0.68**) between the two methods of Metro Shake roof construction is relatively small when compared to attic insulation of R-19 for older homes or R-30 for newer homes. Both proved to exceed the exception to the California Title-24, Energy Code that provides an option of providing an R-Value of 0.85 or greater over an attic area.

## TEST INFORMATION:

*GEO-Science Ltd., R-value HOT-Box testing – ASTM C-1363, MRP- W-29, W-30 & W-30a Nov-2009*

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