

R value and heat capacity for NRG 8" block

NRG 8" block R-value 13.77

Based on:

2.5 inches of EPS @R-4.4/ inch, (R-11)

R- 2.09 for a mid-range 125 pcf block

<http://ncma-br.org/pdfs/66/TEK%2006-02C1.pdf>

$R-11 + R- 2.09 = R-13.09$

R- 0.68 interior air barrier R-value (NCMA thermal catalog 2nd edition)

R-value  $13.09 + R-.68 = R-13.77$ .

Heat capacity of NRG 8" block

43 lbs per 128 sq in X 1.12 = 48 lbs per sq ft x .21 (specific heat of concrete)

HC = wall weight (lb/ft<sup>2</sup>) x specific heat (Btu/lb °F)

HC = 48 lbs/ft<sup>2</sup> x 0.21 Btu/lb · °F

HC = 10.08 Btu/ft<sup>2</sup>