



From: Marty Walters
General Manager

NRG Insulated Block
6980 Derby Road
Derby, NY 14047
www.nrgblock.com
(716) 947-9298
mjww@verizon.net

R value and heat capacity for NRG 12" block

NRG 12" block R-value 13.88

Based on:

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

R- 2.2 for a mid-range 125 pcf block

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

$$R-11 + R- 2.2 = R-13.2$$

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

$$R\text{-value } 13.2 + R\text{-}.68 = R\text{-}13.88.$$

$$U\text{-value } 1/R = .072$$

Heat capacity of NRG 12" block

66 lbs per 128 sq in X 1.12 73lbs per sq ft x.21 (specific heat of concrete)

HC = wall weight (lb/ft²) x specific heat (Btu/lb °F)

$$HC = 73 \text{ lbs/ft}^2 \times 0.21 \text{ Btu/lb} \cdot \text{°F}$$

$$HC = 16.06 \text{ Btu/ft}^2$$