



Roof Insulation

Above deck roof insulation is required* by ASHRAE 90.1, the energy standard for all commercial buildings and for residential buildings greater than 3 stories in height. ASHRAE 90.1-2004 is referenced in the 2006 International Energy Conservation Code and is in effect over much of the USA. The updated ASHRAE 90.1-2007 was published early in 2008, and will be referenced in future codes.

ASHRAE 90.1 defines a “roof with insulation entirely above deck” as “a roof with all insulation 1) installed above (outside of) the roof structure and, 2) continuous (i.e., uninterrupted by framing members.)

Table 1 compares prescriptive requirements of the 2004 and 2007 editions of ASHRAE 90.1. 2007 levels are based on today’s energy economics. ASHRAE prescriptive insulation levels are likely to increase again in 2010, driven by aggressive national energy conservation policy. Specifiers should consider exceeding minimum standards based on the expected useful life of the building coupled with economic return.

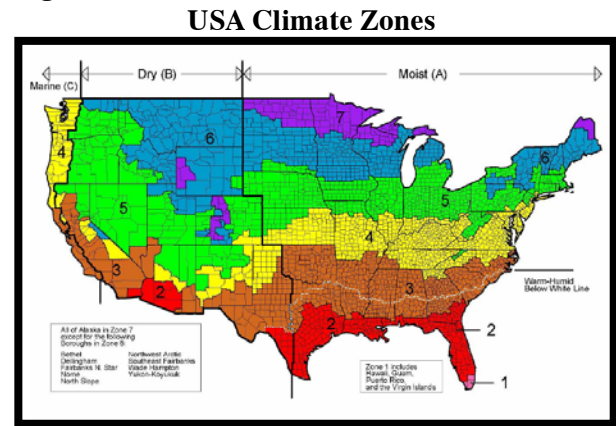
Table 1
Roof Insulation Entirely Above Deck
Prescriptive Requirements
ASHRAE 90.1

Climate Zone	2004 Edition		2007 Edition	
	Non-Res	Res	Non-Res	Res
1	15	15	15	20
2	15	15	20	20
3	15	15	20	20
4	15	15	20	20
5	15	15	20	20
6	15	15	20	20
7	15	15	20	20
8	20	20	20	20

Non-Res (Non-Residential)
Res (Residential)

Climate Zones for the continental USA are shown in Figure 1. Alaska is Zone 7, except the most northern boroughs that are Zone 8. Hawaii is Zone 1.

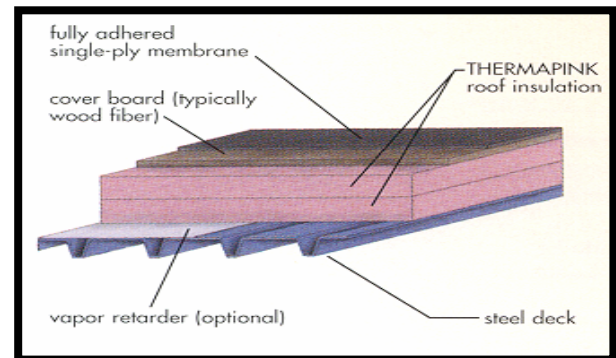
Figure 1



Thermapink® Extruded Polystyrene Insulation, installed entirely above the roof deck and continuous, is shown in Figure 2.

Figure 2

Roof Deck Assembly**
with Insulation Entirely Above Deck



** Other variations of this assembly may include metal roofing, or other mechanically attached or fully adhered membranes, and other colors such as white, and, other cover layers such as a lightweight fabric slip sheet or gypsum board as appropriate for each system. Thermapink is applied direct to deck in accordance with Underwriters Laboratories Roof Deck Construction #457.

* When using the prescriptive compliance method.

Reference:

ASHRAE Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings; American Society of Heating, Refrigerating and Air-Conditioning Engineers; Atlanta, Ga. ASHRAE 90.1-2007 will be published in the fall of 2007.



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