

## Fact Sheet on R-Values of Insul-Deck Floors & Roofs

This is Expanded Polystyrene (EPS) board insulation.

### Insulation Product Rating

Insul-Deck panels provide R-7.8 h•ft<sup>2</sup>•°F/BTU [= R<sub>SI</sub> 1.381 m<sup>2</sup>•°K/W] @ 75° F mean temperature at the concrete joists and the following calculated values between the joists:

Insul-Deck Panel Thickness	Floor or Ceiling R-values h•ft <sup>2</sup> •°F/BTU	R <sub>SI</sub> m <sup>2</sup> •°K/W
	@ 75° F	@ 24° C
7"	<b>18</b>	3.17
8"	<b>22</b>	3.91
9"	<b>26</b>	4.64
10"	<b>30.5</b>	5.26
11"	<b>34.5</b>	6.08
12"	<b>38.5</b>	6.79
12 ½"	<b>40.5</b>	7.14

#### **READ THIS BEFORE YOU BUY**

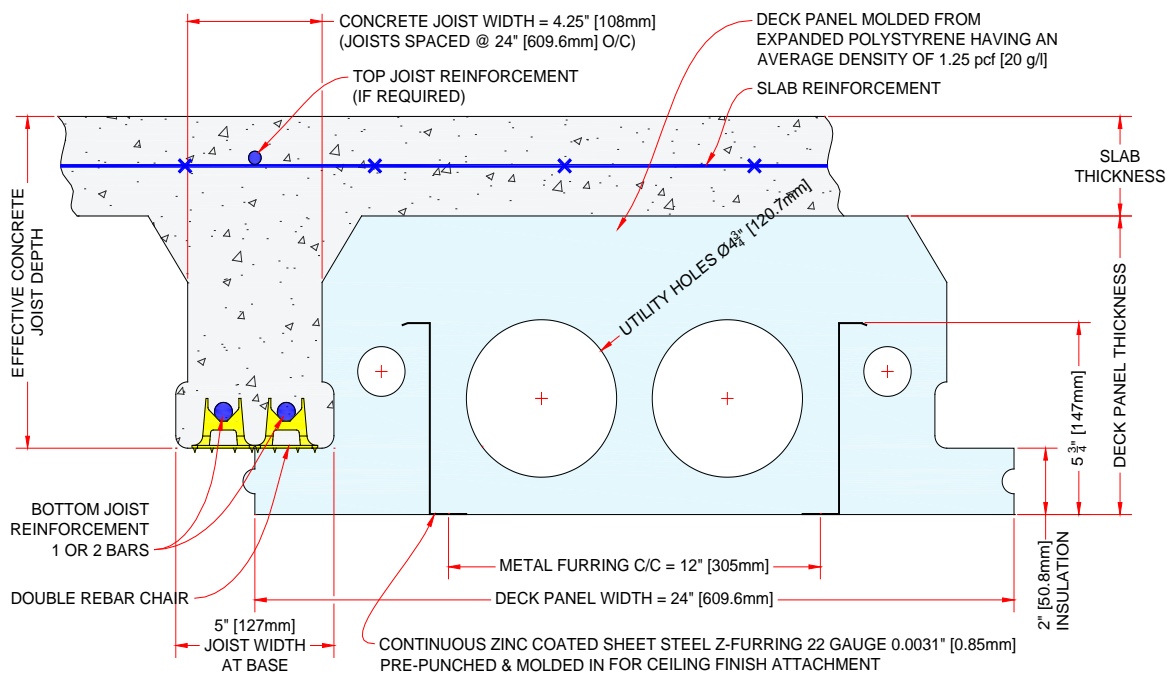
##### **What You Should Know About R-values**

The charts show the R-value of this insulation. R means resistance to heat flow. The higher the R-value, the greater the insulating power. Compare insulation R-values before you buy. There are other factors to consider. The amount of insulation you need depends mainly on the climate you live in. Also, your fuel savings from insulation will depend upon the climate, the type and size of your house, the amount of insulation already in your house, your fuel use patterns and family size, proper installation of your insulation, and how tightly your house is sealed against air leaks. If you buy too much insulation, it will cost you more than what you'll save on fuel. To get the marked R-value, it is essential that this insulation be installed properly. If you do it yourself, get instructions and follow them carefully.

## Assembly Insulation Values (Energy Modeling or Total UA Alternative)

The insulation values in the following table were calculated for **completed Floor or Roof Assemblies**, including the thermal bridging effect of the concrete joists, with Insul-Deck EPS panels (1.25 PCF avg. density) on the underside, 3" concrete slab thickness, and they contain R-1.43 for: inside air film (horiz. avg.), ½" gypsum wallboard, and outside air film.

Insul-Deck Panel Thickness	R-values		U-factors	Rsi	
	@ 75° F when cooling	@ 40° F when heating in colder climates	@ 75° F when cooling	@ 24° C when cooling	@ 4° C
7"	16.2	17.4	0.062	2.85	3.07
8"	18.3	20	0.055	3.22	3.53
9"	20	21.9	0.050	3.53	3.85
10"	21.6	23.4	0.046	3.8	4.12
11"	23	25.2	0.043	4.06	4.43
12"	24.4	26.5	0.041	4.29	4.66
12 ½"	24.7	27.1	0.040	4.36	4.77



### Additional Insulation when needed

