Adding Wall Insulation

Maximum Coverage				
Sidewalls	**Thickness** (inches)	**Square Feet per Bag**		**Weight per Square Foot**
		16" O.C.	24" O.C.	
R-13 (2x4)	3.5	33.8	32.7	0.758
R-20 (2x6)	5.5	21.5	20.8	1.192

Assume a 15% waste allowance for spillage – (Certification written testing may not consider this).

How many bags of insulation would be called for if insulating 1200 ft^2 of wall with 2x4 studs on 16" centers?

Bags: _____ (1200 ÷ 33.8 = 35.5 bags x 1.15 = **40.8 – 41 bags**)

What if a coverage chart is not available?

How many cubic feet are in each square foot of wall?

For 2x4 walls: 1ft x 1ft x 3.5 inches of wall cavity ÷ 12 inches = .2917 ft^3
For 2x6 walls: 1ft x 1ft x 5.5 inches of wall cavity ÷ 12 inches = .4583 ft^3

Assume 3.5 lbs/ft^3 density and 36 lb. bags. How many bags of insulation would be called for to insulate that same 1200 ft^2 of wall with 2x4 studs on 16" centers?

Bags: _____ (1200 x .2917 x 3.5 ÷ 36 = 34 bags x 1.15 = **39.1 – 39 bags**)

Look at it another way:

High density is considered between 3.5 lbs/ft^3 and 4 lbs/ft^3. How many pounds per square foot would that work out to be for a 2x4 wall?

3.5 lbs/ft^3 x .2917 ft^3 = 1.02 lbs/ft^2
4.0 lbs/ft^3 x .2917 ft^3 = 1.17 lbs/ft^2

A close estimation at the 3.5 lb density would be to take the square footage of the wall and divide it by the # weight of the bag.

1200 ft^2 wall ÷ 36 lb. bag = 33.3 bags x 1.15 = **38** bags – Very close to 39