

WallBAR™ (WB14) Application / Coverage Charts

30.86 lb (14.0 kg) Net Weight / Bag – Commercial Package Volume: 3.7 ft³ (105 dm³)
 Available Cavity Installation (free volume per bag): 11.1 ft³ (0.314 m³) at 2.78 lb/ft³ (44.53 kg/m³)



RESIDENTIAL WALL CAVITIES

(Wood-frame – Vertical / Sloped)

MEMBRANE-INJECTED (DRY) OR SPRAY-APPLIED (MIST)

Updated February 2008 – Supersedes all previous coverage charts



Imperial System				Metric System			
ACTUAL Thickness	“R” Value	Minimum MASS (lb./ft ²)	ADJUSTED COVERAGE* Per Bag (ft ²)	ACTUAL Thickness	“RSI” Value	Minimum MASS (kg/m ²)	ADJUSTED COVERAGE* Per Bag (m ²)
3.5” (2x4)	13.2	0.81	52.9	89 mm	2.33	3.96	4.91
4.1” (2x4+) (3/4” Strapping)	15.5	0.95	45.1	104 mm (15mm Strapping)	2.72	4.63	4.20
5.5” (2x6)	20.8	1.27	33.6	140 mm	3.67	6.23	3.12
6.1” (2x6+) (3/4” Strapping)	23.1	1.41	30.1	155 mm (15mm Strapping)	4.06	6.90	2.82
7.3” (2x8)	27.6	1.69	25.3	185 mm	4.85	8.24	2.36
9.2” (2x10)	34.8	2.30	18.6	234 mm	6.13	11.25	1.24

*Actual coverage results vary due to job conditions – see coverage notes for the above chart on the reverse of this page.



COMMERCIAL WALL CAVITIES

(Wood-frame – Vertical / Sloped)

MEMBRANE-INJECTED (DRY) OR SPRAY-APPLIED (MIST)

Updated February 2008 – Supersedes all previous coverage charts



Imperial System				Metric System			
ACTUAL Thickness	“R” Value	Minimum MASS (lb./ft ²)	ADJUSTED COVERAGE* Per Bag (ft ²)	ACTUAL Thickness	“RSI” Value	Minimum MASS (kg/m ²)	ADJUSTED COVERAGE* Per Bag (m ²)
5.5” (2x6)	20.8	1.27	26.6	140 mm	3.66	6.23	2.46
7.0” (2x6+) (2x4 strapped)	26.5	1.62	20.9	178 mm (38x89mm STRAP)	4.67	7.93	1.94
7.3” (2x8)	27.6	1.69	20.1	185 mm	4.85	8.24	1.87
8.8” (2x8+) (2x4 strapped)	33.3	2.20	15.4	229 mm (38x89mm STRAP)	6.00	11.01	1.40
9.2” (2x10)	34.8	2.30	14.7	234 mm	6.13	11.25	1.24

*Actual coverage results vary due to job conditions – see coverage notes for the above chart on the reverse of this page.

CCI Manufacturing Inc.

Office: 16355-130 Avenue, Edmonton, AB T5V 1K5 Ph. (780) 453-3610 Fax (780) 447-2443

1-888-269-6977

www.weathershield.ca

WallBAR™ WALL CAVITY APPLICATIONS AND CHARTS – COVERAGE NOTES

February 2008

Please note that the coverage charts on the reverse of this page supersede all previous versions and provide the latest in WallBAR™ coverage information for wood-frame wall construction. Coverage information for steel-stud construction will be issued separately.

Thermal resistance (R/RSI) values used in this chart are based on test results of R-3.78 per inch (RSI 0.0262 per mm) for WallBAR™ produced at Can-Cell's Edmonton Manufacturing Plant.

Common wall cavity coverage values are based on WallBAR™'s net package weight of 30.86 lb. (14.0 kg) and its specified minimum installation density of 2.78 lb/ft³ (44.53 kg/m³) for cavities up to 7½" (190 mm) in depth (i.e. nominal 2x8 cavities). WallBAR™'s available cavity installation volume under such conditions is 11.1 ft³ (0.314 m³) per bag.

Since coverage tends to be reduced accordingly for walls having higher proportions of installable space (that is, for cavities deeper than 7½" and/or stud spacing greater than 24"OC), a coverage density of 3.00 lb/ft³ (48.06 kg/m³) has been used for strapped 2x8 and 2x10 cavities. WallBAR™'s available cavity installation volume under these conditions is 10.3 ft³ (0.292 m³) per bag.

In cavities more than 10' (3 m) in height or length, it is generally recommended that blocking be applied midway to solidify the structure. This also provides the support that allows WallBAR™ to be applied at its lower coverage density of 2.78 lb/ft³ (44.53 kg/m³). In very long or tall cavities, Can-Cell recommends that blocking occur for each 8' (2.4 m) of 24"OC (570 mm net) cavity space and at least every 10' (3 m) for 16"OC (370 mm net) cavity space. Cavities of 12' to 20' (3.6-6.1 m) in height that are not blocked midway (or where blocking is impractical to add) require higher application densities (as high as 3.5 lb/ft³, 56 kg/m³) to compensate for the greater settlement potential.

"ADJUSTED" COVERAGE VALUES

Residential

In the residential application chart, the "Adjusted Coverage" value is the result of a surface area adjustment of 38.9 % (example wall is 8' (2.4 m) high with double top plate, single bottom plate and full depth studding spaced 16" / 400 mm OC). This adjustment is based on new data compiled by Natural Resources Canada regarding new residential construction in Canada reporting that an average of 28% of exterior wall area is occupied by windows/doors (accounting for 13%) and framing (accounting for 15%). This means that only 72% of exterior wall area is cavity space that can be insulated – to account for this in consideration of whole wall measurements, a factor of 1.388 (i.e. 100 / 72) has been applied to raw coverage values.

Actual adjustment factors may vary, especially with retrofit applications of older homes.

Commercial

In the commercial application chart, the "Adjusted Coverage" value is the result of a surface area adjustment of 9.9 %. This considers framing only, being approximately 9% of exterior wall area (example wall is 10' (3 m) high with double top plate, single bottom plate and full depth studding spaced 24" / 600 mm OC). Since the size and number of windows and doors in commercial construction varies so much, their areas must be measured and deducted from the overall wall area of each individual job in order to arrive at accurate material requirements.

In commercial applications such as animal barns, framing allowances will vary since there is no standard or even typical design. 2x4 strapping (furring) is often used in both new construction and retrofit. Strapping allowances must be calculated for each individual application and deducted from the overall wall area.

For more information on WallBAR™ and its applications, contact your Can-Cell representative.



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