

**NEW AND
IMPROVED**



CUSTOMIZED BATT INSULATION

CREATED ON THE JOB

ULTRAFIT^{PS}
Spray-On Insulation System **PLUS**

Designed For: New Construction And Retrofit | Sidewall Application | Metal Framing
Sound Control | Residential Or Light Construction - Non Exposed

ULTRAFIT^{DS} Spray-On Insulation System PLUS

Nearly 50% of all wall cavities in today's homes contain some type of obstruction (i.e. wiring, pipes, electrical boxes, etc.) along with non-standard framing in width and height. In response to these construction methods, Guardian Building Products developed the UltraFitDS[®] PLUS

Spray-On Insulation System which conforms to all shapes and sizes of wall cavities and fills in and around all wall obstructions. Each customized, one-piece batt is created on the job site for a perfect fit every time.



FEATURES AND BENEFITS

Typically 2-3 Times More Fiberglass In Your Walls*

- Most homes today utilize 3 1/2" blanket insulation in the walls which has significantly less fiberglass.

UltraFitDS PLUS Contains Water Activated

Powdered Adhesive - This inorganic powdered adhesive, when water-activated, bonds the fibers together creating a monolithic blanket of insulation in side wall applications.

Reduced Air Infiltration* - The unique application of the UltraFitDS PLUS system virtually eliminates gaps and voids and significantly reduces air infiltration.

Improved R-values - The increased density of fiberglass in the UltraFit DS PLUS system delivers higher R-values when compared to standard R-11 and R-13 batt in a 2x4 cavity or R-19 batt insulation in a 2x6 cavity.

Excellent Sound Control - Small gaps or voids in the insulation can reduce its effectiveness as a sound control device. Due to the custom monolithic installation of the UltraFitDS PLUS system, it provides excellent noise control properties.

*Compared to standard 3 1/2", R-11 or R-13 blanket insulation in a 2x4 cavity when UltraFitDS PLUS is installed in accordance with all bag label specifications.

UltraFitDS PLUS IS DESIGNED FOR THESE USES:

- New Construction And Retrofit
- Residential Or Light Commercial - Non-Exposed Applications
- Side wall Application
- Metal Framing Sidewalls In Residential
- Sound Control



SIDEWALL COVERAGE INFORMATION

| R-VALUE NOMINAL | THICKNESS | DENSITY | BAGS PER 1000 FT ² | MIN. WEIGHT PER FT ² | MAXIMUM COVERAGE PER BAG |
|--|--|----------------------------|---|---------------------------------|---|
| To obtain a thermal resistance (R) of: | Installed insulation should not be less than: (inches) | Pounds per ft ³ | Bags per 1000 ft ² of net area | Pounds per ft ² | Content of bag should not cover more than: (ft ²) |
| R-14 | 3.50" (2x4) | 1.6 | 14.7 | 0.47 | 68 |
| R-22 | 5.50" (2x6) | | 23.1 | 0.73 | 43 |
| R-29 | 7.25" (2x8) | | 30.5 | 0.97 | 33 |
| R-37 | 9.25" (2x10) | | 38.9 | 1.23 | 26 |
| R-15 | 3.50" (2x4) | 1.9 | 18.5 | 0.55 | 54 |
| R-24 | 5.50" (2x6) | | 29.1 | 0.87 | 34 |
| R-31 | 7.25" (2x8) | | 38.4 | 1.15 | 26 |
| R-40 | 9.25" (2x10) | | 49.0 | 1.46 | 20 |

For pneumatic application only. This product is designed to be installed using appropriate machines. The machine settings supplied by the manufacturer for this equipment should be used carefully in order to get optimum results. The equipment must be designed for fiberglass and has to have an effective shredding section, a controlled feed section and sufficient air volume to achieve the desired result. To achieve stated R-values, the insulation must be installed at these minimal thicknesses and maximum coverages. Failure to install both the required bags and at least the minimum thickness will lower R-value. Net coverage includes framing. Not for exposed applications. Insulation should not be installed over eave vents or near light fixtures or other heat generating devices. Nominal bag weight 32 lbs.

THE DIFFERENCE



Any void area in conventional batt insulation can significantly reduce the R-value, resulting in heat loss. However, when the UltraFitDS PLUS fiberglass is sprayed into a wall cavity, it fills around pipes, wires, electrical outlets and other objects, significantly reducing voids and air gaps.

Only qualified installers approved by Guardian Building Products may install and market the UltraFitDS PLUS wall system. Any installation of fiberglass insulation using the UltraFitDS PLUS wall system must be done in accordance with all product instructions, as set forth by Guardian Building Products, to achieve the stated values listed in the coverage charts above.

R-VALUE INFORMATION

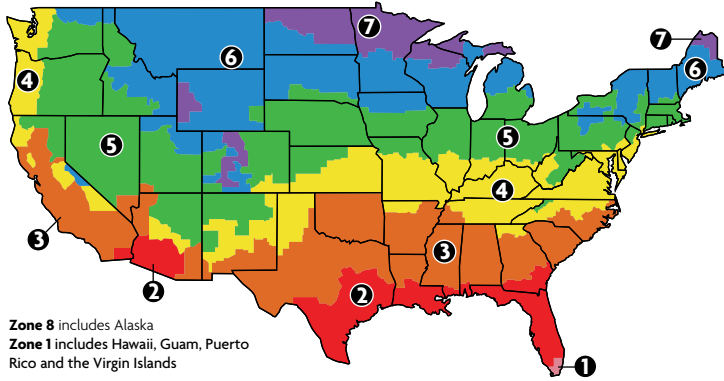
Insulation is specified by its thermal resistance or R-value. "R" means resistance to heat flow. The higher the R-value, the greater the insulating power.

The amount of insulation you need depends mainly on climate, type of heating (gas, oil, electricity) you use, and the area of the house you plan to insulate.

The U.S. Dept. of Energy has established minimum recommended insulation R-values for 7 distinct parts of the country, or insulation zones.

FIND THE R-VALUES FOR YOUR ZONE.

If you live on the border between two zones, choose the higher rather than the lower values.



R-VALUES FOR NEW WOOD-FRAMED HOUSES

| Insulation Zone | Heating System | Attic | Cathedral Ceiling | Wall | | Floor |
|-----------------|---------------------------------------|--------------|------------------------------|------------------------------|----------------------------|----------------------|
| | | | | Cavity | Insulation Sheathing | |
| 1 | All | R-30 to R-49 | R-22 to R-28 | R-13 to R-15 | None | R-13 |
| 2 | Gas, Oil, Heat Pump, Electric Furnace | R-30 to R-60 | R-22 to R-38 | R-13 to R-15 | None | R-13 R-19 to R-25 |
| 3 | Gas, Oil, Heat Pump, Electric Furnace | R-30 to R-60 | R-22 to R-38 | R-13 to R-15 | None | R-25 |
| 4 | Gas, Oil, Heat Pump, Electric Furnace | R-38 to R-60 | R-30 to R-38 | R-13 to R-15 | R-2.5 to R-6 R-5 to R-6 | R-25 to R-30 |
| 5 | Gas, Oil, Heat Pump, Electric Furnace | R-38 to R-60 | R-30 to R-38 R-30 to R-60 | R-13 to R-15 R-13 to R-21 | R-2.5 to R-6 R-5 to R-6 | R-25 to R-30 |
| 6 | All | R-49 to R-60 | R-30 to R-60 | R-13 to R-21 | R-5 to R-6 | R-25 to R-30 |
| 7 & 8 | All | R-49 to R-60 | R-30 to R-60 | R-13 to R-21 | R-5 to R-6 | R-25 to R-30 |

R-VALUES FOR EXISTING WOOD-FRAMED HOUSES

| Insulation Zone | Add Insulation To Attic | | Floor |
|-----------------|-------------------------|-----------------------------------|--------------|
| | Uninsulated Attic | Existing 3-4 Inches Of Insulation | |
| 1 | R-30 to R-49 | R-25 to R-30 | R-13 |
| 2 | R-30 to R-60 | R-25 to R-38 | R-13 to R-19 |
| 3 | R-30 to R-60 | R-25 to R-38 | R-19 to R-25 |
| 4 | R-38 to R-60 | R-38 | R-25 to R-30 |
| 5 | R-49 to R-60 | R-38 to R-49 | R-25 to R-30 |
| 6 | R-49 to R-60 | R-38 to R-49 | R-25 to R-30 |
| 7 & 8 | R-49 to R-60 | R-38 to R-49 | R-25 to R-30 |

WALL INSULATION: WHENEVER EXTERIOR SIDING IS REMOVED ON AN -

Uninsulated wood-frame wall:

- Drill holes in the sheathing and blow insulation into the empty wall cavity before installing the new siding
- Zones 3-4: Add R-5 insulative wall sheathing beneath the new siding
- Zones 5-8: Add R-5 to R-6 insulative wall sheathing beneath the new siding.

Insulated wood-frame wall:

- Zones 4 to 8; Add R-5 insulative sheathing before installing the new siding.

VAPOR RETARDERS

Guardian recommends the installation of an interior vapor retarder in conjunction with the application of UltraFitDS PLUS in climate zones 5, 6 and 7.

Independent laboratory testing of UltraFitDS PLUS shows a significant reduction in air infiltration through the wall cavity vs. typical fiberglass batts. Water vapor is primarily carried by air, so a reduction in air movement into the wall cavity means there will be a reduction in water vapor movement into the cavity as well.

In locations where local building codes require the installation of a vapor retarder, the

installed UltraFitDS PLUS should set a minimum of 24 hours, and be dry to not more than 15% moisture content before installing a vapor retarder. The use or creation of simultaneous interior and exterior (double) vapor retarders should be avoided. The placement of vapor retarders is highly dependent on geographical location and the type of climate. **Local building code officials should always be consulted and their recommendations followed on this issue.**

COMPLIANCES

- ICC ES ER-5437
- Type 1, ASTM C 1014-88 and ASTM C 764
- CCMC 13315-R
- Non-combustible, as determined by ASTM E 136
- Non-corrosive
- Surface Burning Characteristics in accordance with ASTM E 84
 - Flame Spread Index of 25 or less
 - Smoke Developed 50 or less
- Thermal Resistance values determined in accordance with ASTM C 518
- Inorganic - Does not promote or support fungus growth in accordance with ASTM C 1338

UltraFitDS® PLUS is not intended for use in exposed applications.

| | | | |
|--|-----------|-----------|-----------|
| UltraFitDS® PLUS technology is covered by one or more of the following U.S. Patents: | 5,641,368 | 5,947,646 | 6,047,518 |
| UltraFitDS® PLUS technology is also covered by the following Canadian Patents: | 5,666,780 | 5,952,418 | |
| | 5,921,055 | 5,984,590 | |
| | | 2,181,295 | 2,226,341 |
| | | 2,204,685 | |

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