



# R-Tech® Fanfold Roof Underlayment

## Description

R-Tech Fanfold Roof Underlayment is a high-performance sheathing consisting of a superior closed-cell, lightweight and resilient expanded polystyrene (EPS) with advanced polymeric laminate facers. The core of R-Tech is the same high-quality as our InsulFoam® brand insulations, and meets or exceeds the requirements of ASTM C578, *Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*. In addition, R-Tech has excellent dimensional stability, compressive strength and water resistant properties.

## Uses

R-Tech Fanfold Roof Underlayment is ideal in re-cover applications, and is well-suited for single ply roof applications that employ mechanically fastened or ballasted TPO, PVC, EPDM and CSPE membranes. Consult local building codes and membrane manufacturers for system requirements.

## Advantages

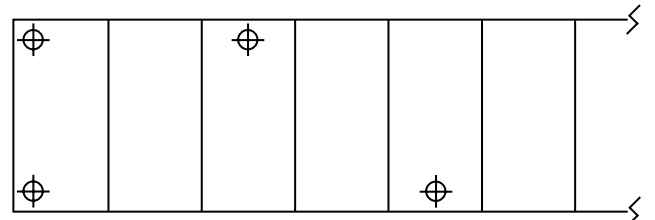
- **Labor Savings.** R-Tech Fanfold comes in 200-sq.-ft. bundles, and is lightweight enough that the average roof mechanic can carry an R-Tech bundle under each arm (a total of 4 squares). Competing 4' x 8' re-cover products would require 13 sheets to cover 4 squares.
- **User Friendly.** The R-Tech manufacturing process ensures that it will lay flat during installation, eliminating the thermoplastic roof system seam-welding issues that are experienced with other fanfold products.
- **Versatile.** The unique polymeric laminate facers allow single ply membranes, including PVC, to be installed directly over R-Tech without additional slip sheets or divorcement.
- **Cost-Effective.** R-Tech is typically less expensive than other re-cover products, requires fewer fasteners per square foot, and is easier to handle.
- **Environmentally Friendly.** It contains no formaldehyde or ozone-depleting CFCs or HCFCs, may contain recycled material, and has a foam core that is 100% recyclable.
- **Proven Performance.** The same fundamental chemistry has been in use since the mid-1950s, so the actual performance of the product is well known.
- **Water-Resistant.** R-Tech is hydrophobic (does not readily absorb moisture) and does not promote the migration of moisture into the insulation.
- **Code Approvals.** R-Tech has numerous re-cover listings with Underwriters Laboratories. Please refer to UL's Roofing Materials Directory or contact your Insulfoam representative for additional information.



## Sizes

R-Tech Fanfold Roof Underlayment is available in nominal thicknesses of 3/8", 1/2" and 3/4" with the 4' x 50' fanfold (2 squares). Individual panel sizes within the fanfold bundle are 2' x 4'. R-Tech is also available in 4' x 8' units.

## Installation Recommendations



- One fastener is to be placed at each corner of the leading and trailing edges, and thereafter at a rate of one fastener every 12 square feet placed on alternating sides of the sheet.
- Fasteners are to be 6" from the board's edge.
- When used with dark colored membranes, R-Tech should be installed with the silver or metallic side facing up.

**Note:** Some membrane manufacturers may require a higher density of fasteners for their warranted systems. Consult the membrane manufacturer for specific requirements.

**Typical Physical Properties of InsulFoam\***

| Typical Physical Properties of InsulFoam*                           |           |           |           |           |                              |
|---|-----------|-----------|-----------|-----------|------------------------------|
| Property  | Type I    | Type VIII | Type II   | Type IX   | Test Method                  |
| <b>Nominal Density</b> (pcf)  | 1.0       | 1.25      | 1.5       | 2.0       | ASTM C303                    |
| <b>C-Value (Conductance)</b><br>BTU/(hr•ft <sup>2</sup> •°F)        |           |           |           |           | ASTM C518<br>or<br>ASTM C177 |
| (per inch) @ 25° F  | .23       | .22       | .21       | .20       |                              |
| @ 40° F   | .24       | .235      | .22       | .21       |                              |
| @ 75° F   | .26       | .255      | .24       | .23       |                              |
| <b>R-Value (Thermal Resistance)</b><br>(hr•ft <sup>2</sup> •°F)/BTU |           |           |           |           | ASTM C518<br>or<br>ASTM C177 |
| (per inch) @ 25° F  | 4.35      | 4.54      | 4.76      | 5.00      |                              |
| @ 40° F   | 4.17      | 4.25      | 4.55      | 4.76      |                              |
| @ 75° F   | 3.85      | 3.92      | 4.17      | 4.35      |                              |
| <b>Compressive Strength</b><br>(psi, 10% deformation)               | 10 - 14   | 13 - 18   | 15 - 21   | 25 - 33   | ASTM D1621                   |
| <b>Flexural Strength</b> (psi)                                      | 25 - 30   | 32 - 38   | 40 - 50   | 55 - 75   | ASTM C203                    |
| <b>Dimensional Stability</b><br>(maximum %)                         | < 2%      | < 2%      | < 2%      | < 2%      | ASTM D2126                   |
| <b>Water Vapor Transmission</b><br>(perms)                          | 2.0 - 5.0 | 1.5 - 3.5 | 1.0 - 3.5 | 0.6 - 2.0 | ASTM E96                     |
| <b>Absorption</b> (% vol.)  | < 4.0     | < 3.0     | < 3.0     | < 2.0     | ASTM C272                    |
| <b>Capillarity</b>  | none      | none      | none      | none      | –                            |
| <b>Flame Spread</b>   | < 20      | < 20      | < 20      | < 20      | UL 723                       |
| <b>Smoke Developed</b>  | 150 - 300 | 150 - 300 | 150 - 300 | 150 - 300 | UL 723                       |
| Typical Physical Properties of R-Tech*                              |           |           |           |           |                              |
| <b>Compressive Strength</b><br>(psi, 10% deformation)               | 13        | 16        | 20        | 28        | ASTM D1621                   |
| <b>Flexural Strength</b> (psi)                                      | 33        | 40        | 50        | 70        | ASTM C203                    |
| <b>Water Vapor Transmission</b><br>(perms)                          | < 1.0     | < 1.0     | < 1.0     | < 1.0     | ASTM E96                     |
| <b>Absorption</b> (% vol.)  | < 1.0     | < 1.0     | < 1.0     | < 1.0     | ASTM C272                    |

\*Properties are based on data provided by resin manufacturers, independent test agencies and Insulfoam.