



# FOAMULAR® Extruded Polystyrene (XPS) Insulation

## SI and I-P Units for Selected Properties

### Technical Bulletin

This bulletin provides thermal conductivity, thermal resistance, density and compressive strength for FOAMULAR® 150, 250, 400, 600 and 1000 insulation in thicknesses of 2", 3" and 4". SI units are provided in the tables, followed by I-P units in parenthesis.

#### FOAMULAR® 150 Insulation

| Thickness, mm | Thermal Conductivity, W/mK, max. | Thermal Resistance, m <sup>2</sup> K/W, min. | Density, kg/m <sup>3</sup> , min. | Compressive Strength, kPa, min. |
|---------------|----------------------------------|--|-----------------------------------|---------------------------------|
| 100 (4")      | 0.029 (k=0.20)                   | 3.53 (R-20)                                  | 20.8 (1.3 pcf)                    | 103 (15 psi)                    |
| 75 (3")       | 0.029 (k=0.20)                   | 2.65 (R-15)                                  | 20.8 (1.3 pcf)                    | 103 (15 psi)                    |
| 50 (2")       | 0.029 (k=0.20)                   | 1.77 (R-10)                                  | 20.8 (1.3 pcf)                    | 103 (15 psi)                    |

#### FOAMULAR® 250 Insulation

| Thickness, mm | Thermal Conductivity, W/mK, max. | Thermal Resistance, m <sup>2</sup> K/W, min. | Density, kg/m <sup>3</sup> , min. | Compressive Strength, kPa, min. |
|---------------|----------------------------------|--|-----------------------------------|---------------------------------|
| 100 (4")      | 0.029 (k=0.20)                   | 3.53 (R-20)                                  | 24.8 (1.55 pcf)                   | 172 (25 psi)                    |
| 75 (3")       | 0.029 (k=0.20)                   | 2.65 (R-15)                                  | 24.8 (1.55 pcf)                   | 172 (25 psi)                    |
| 50 (2")       | 0.029 (k=0.20)                   | 1.77 (R-10)                                  | 24.8 (1.55 pcf)                   | 172 (25 psi)                    |

#### FOAMULAR® 400 Insulation

| Thickness, mm | Thermal Conductivity, W/mK, max. | Thermal Resistance, m <sup>2</sup> K/W, min. | Density, kg/m <sup>3</sup> , min. | Compressive Strength, kPa, min. |
|---------------|----------------------------------|--|-----------------------------------|---------------------------------|
| 100 (4")      | 0.029 (k=0.20)                   | 3.53 (R-20)                                  | 28.9 (1.8 pcf)                    | 276 (40 psi)                    |
| 75 (3")       | 0.029 (k=0.20)                   | 2.65 (R-15)                                  | 28.9 (1.8 pcf)                    | 276 (40 psi)                    |
| 50 (2")       | 0.029 (k=0.20)                   | 1.77 (R-10)                                  | 28.9 (1.8 pcf)                    | 276 (40 psi)                    |

#### FOAMULAR® 600 Insulation

| Thickness, mm | Thermal Conductivity, W/mK, max. | Thermal Resistance, m <sup>2</sup> K/W, min. | Density, kg/m <sup>3</sup> , min. | Compressive Strength, kPa, min. |
|---------------|----------------------------------|--|-----------------------------------|---------------------------------|
| 100 (4")      | 0.029 (k=0.20)                   | 3.53 (R-20)                                  | 35.3 (2.2 pcf)                    | 414 (60 psi)                    |
| 75 (3")       | 0.029 (k=0.20)                   | 2.65 (R-15)                                  | 35.3 (2.2 pcf)                    | 414 (60 psi)                    |
| 50 (2")       | 0.029 (k=0.20)                   | 1.77 (R-10)                                  | 35.3 (2.2 pcf)                    | 414 (60 psi)                    |

#### FOAMULAR® 1000 Insulation

| Thickness, mm | Thermal Conductivity, W/mK, max. | Thermal Resistance, m <sup>2</sup> K/W, min. | Density, kg/m <sup>3</sup> , min. | Compressive Strength, kPa, min. |
|---------------|----------------------------------|--|-----------------------------------|---------------------------------|
| 100 (4")      | 0.029 (k=0.20)                   | 3.53 (R-20)                                  | 48.1 (3.0 pcf)                    | 690 (100 psi)                   |
| 75 (3")       | 0.029 (k=0.20)                   | 2.65 (R-15)                                  | 48.1 (3.0 pcf)                    | 690 (100 psi)                   |
| 50 (2")       | 0.029 (k=0.20)                   | 1.77 (R-10)                                  | 48.1 (3.0 pcf)                    | 690 (100 psi)                   |

#### Notes:

- SI, the International System of Units (Metric). I-P, inch-pound units (English).
- Conversions are approximate, rounded to the nearest significant digit that is customary for a given property as shown in the tables.
- I-P unit definitions:  
 Thermal Conductivity, "k" = Btu•in/ft.<sup>2</sup>•hr•°F  
 Thermal Resistance, "R" = hr•ft<sup>2</sup>•°F/Btu  
 Compressive Strength, "psi" = pounds per square inch  
 Density, "pcf" = pounds per cubic foot

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