### High-Performance Fiber Glass Pipe Insulation

**Micro-Lok**

A rigid, preformed, one-piece, high-temperature "k" insulation in roll form or cut-to-length form. Micro-Lok™ insulation is designed for use on commercial, power or process lines. *Check for current availability.*

- **Operating Temperature Limit:**
  - IPS: 2" – 24" (13 mm – 610 mm)*
  - CT: 8" (16 mm – 156 mm)

- **Mean Thicknesses:**
  - 500: 260°F (404°C)
  - 400: 204°F (95°C)
  - 300: 149°F (65°C)
  - 200: 93°F (34°C)
  - 100: 38°F (3°C)

#### Operating Temperature Limit

- **THERMAL CONDUCTIVITY (“k”)**
  - Btu•in/(hr•ft•°F) W/m•°C
  - Mean

<table>
<thead>
<tr>
<th>Temperature °F</th>
<th>°C</th>
<th>“k” Btu•in/(hr•ft•°F)</th>
<th>“k” W/m•°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>260</td>
<td>0.55</td>
<td>0.84</td>
</tr>
<tr>
<td>400</td>
<td>204</td>
<td>0.44</td>
<td>0.63</td>
</tr>
<tr>
<td>300</td>
<td>149</td>
<td>0.34</td>
<td>0.50</td>
</tr>
<tr>
<td>200</td>
<td>93</td>
<td>0.28</td>
<td>0.40</td>
</tr>
<tr>
<td>100</td>
<td>38</td>
<td>0.24</td>
<td>0.35</td>
</tr>
</tbody>
</table>

**Micro-Lok® HP**

A rigid, preformed, one-piece, high-temperature fiber glass pipe insulation. Micro-Lok® HP insulation is designed for use on commercial, power or process lines. Micro-Lok® HP insulation is available in 13 mm – 156 mm (0.5" – 6.1”); IPS sizes are available from ½" through 24”; CT sizes from 5⁄8” through 6 5⁄8” (16 mm through 156 mm).

- **Operating Temperature Limit:**
  - IPS: 2" – 24" (13 mm – 610 mm)*
  - CT: 8" (16 mm – 156 mm)

- **Mean Thicknesses:**
  - 750: 240°F (121°C)
  - 600: 190°F (88°C)
  - 500: 149°F (65°C)
  - 400: 104°F (40°C)
  - 300: 66°F (20°C)
  - 200: 32°F (0°C)
  - 100: 1°F (-17°C)

#### Operating Temperature Limit

- **THERMAL CONDUCTIVITY OF HI-LO® TEMP FIBER GLASS INSULATION INSERT**

<table>
<thead>
<tr>
<th>Temperature °F</th>
<th>°C</th>
<th>“k” Btu•in/(hr•ft•°F)</th>
<th>“k” W/m•°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>750</td>
<td>240</td>
<td>0.34</td>
<td>0.51</td>
</tr>
<tr>
<td>600</td>
<td>190</td>
<td>0.30</td>
<td>0.45</td>
</tr>
<tr>
<td>500</td>
<td>149</td>
<td>0.28</td>
<td>0.40</td>
</tr>
<tr>
<td>400</td>
<td>104</td>
<td>0.24</td>
<td>0.35</td>
</tr>
<tr>
<td>300</td>
<td>66</td>
<td>0.19</td>
<td>0.29</td>
</tr>
<tr>
<td>200</td>
<td>32</td>
<td>0.15</td>
<td>0.23</td>
</tr>
<tr>
<td>100</td>
<td>1</td>
<td>0.08</td>
<td>0.13</td>
</tr>
</tbody>
</table>

**Zeston® PVF**

Insulated Fitting Covers and Jacketing

These PVC fitting covers and jacketing, when combined, form a completely sealed system, providing long-term insulation and protection. Zeston® 2000 PVC is an improved “matched” fit in the fitting throat area and provides ease of fabrication in the field not possible with two-piece or two-piece-welded construction.

- **Insert:** 0°F to 450°F (-18°C to +232°C)
- **PVC:** 0°F to 150°F (-18°C to +66°C)
- **Zeston installation accessories include:**
  - Perma-Weld® solvent welding system adhesive
  - Thumb tacks.

**Zeston® 500 Series PVC**

Fitting Covers and Jacketing for Industrial Use

These heavy-duty PVC insulated fitting covers and jacketing are specifically designed for industrial and institutional pipe applications. Zeston 500 Series fitting covers and jacketing are approved for use over insulated pipe and bare metal, the PVC jacketing is made from the same rugged, pliable PVC material, the same construction and same materials as the Zeston® 2000 PVC and Zeston 300 Series PVC. Zeston 500 Series heavy gauge PVC fitting covers are available in white only. Zeston installation accessories include:

- Zeston 300 Series heavy gauge PVC fitting covers: When solvent welding.
- Two-piece or two-piece-welded construction.
- Made from the same rugged, pliable PVC material, the same construction and same materials as the Zeston® 2000 PVC and Zeston 300 Series PVC.

- **Micro-Lok**
- **Micro-Lok® HP**
- **Zeston® PVF**
- **Zeston® 500 Series PVC**

#### Operating Temperature Limit

- **Zeston 300 Series heavy gauge PVC fitting covers:**
  - Mean
  - CT: 8" (16 mm – 156 mm)
  - IPS: 2" – 24" (13 mm – 610 mm)*

<table>
<thead>
<tr>
<th>Temperature °F</th>
<th>°C</th>
<th>“k” Btu•in/(hr•ft•°F)</th>
<th>“k” W/m•°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT: 8&quot;</td>
<td>16</td>
<td>0.33</td>
<td>0.51</td>
</tr>
<tr>
<td>IPS: 2&quot;</td>
<td>13</td>
<td>0.29</td>
<td>0.45</td>
</tr>
<tr>
<td>IPS: 24&quot;</td>
<td>610</td>
<td>0.24</td>
<td>0.37</td>
</tr>
</tbody>
</table>

- **Zeston PVC jacketing:**
  - Mean
  - CT: 8" (16 mm – 156 mm)
  - IPS: 2" – 24" (13 mm – 610 mm)*

<table>
<thead>
<tr>
<th>Temperature °F</th>
<th>°C</th>
<th>“k” Btu•in/(hr•ft•°F)</th>
<th>“k” W/m•°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT: 8&quot;</td>
<td>16</td>
<td>0.29</td>
<td>0.45</td>
</tr>
<tr>
<td>IPS: 2&quot;</td>
<td>13</td>
<td>0.24</td>
<td>0.37</td>
</tr>
<tr>
<td>IPS: 24&quot;</td>
<td>610</td>
<td>0.20</td>
<td>0.30</td>
</tr>
</tbody>
</table>

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**PERFORMANCE CHARACTERISTICS**

**DESCRIPTION**

This fiber glass insulation board is designed for industrial high-temperature applications in pipes, tanks, ducts and vessels. It can be applied in sheet form, plain or faced, for commercial and industrial heating, air conditioning and process equipment.

**SPECIFICATION COMPLIANCE**

- ASTM C1136, Type II – FSK Facing
- ASTM E84, FHC 25/50 – FSK Facing
- ASMT E84, NFPA 90A and 90B
- NFPA 255
- UL 723
- NYC MEA # 40-75-M
- ASTM C1290
- CAN/CGTSB-51.11, Type 1, Class 4
- CAN/ULC-S102-M88
- CAN/CGSB-51-GP-11M
- MIL-I-22023D, Type I and II, Class 3
- MIL-I-24244B
- USCG 164.009
- MIL-I-22023D, Type I and II, Class 3
- MIL-I-24244B
- USCG 164.009
- HH-I-558B, Form A, Classes 1, 2 and 3
- USCG 164.109/37/0

**OPERATING TEMPERATURE LIMIT**

0°F to 850°F (-18°C to 454°C)

**THERMAL PERFORMANCE – INSTALLED**

<table>
<thead>
<tr>
<th>Type</th>
<th>Thickness</th>
<th>R-value</th>
<th>Mean Temperature °F</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>812</td>
<td>1½</td>
<td>1.50</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>813</td>
<td>1½</td>
<td>1.50</td>
<td>400</td>
<td>204</td>
</tr>
<tr>
<td>814</td>
<td>1½</td>
<td>1.50</td>
<td>500</td>
<td>260</td>
</tr>
<tr>
<td>815</td>
<td>1½</td>
<td>1.50</td>
<td>600</td>
<td>320</td>
</tr>
<tr>
<td>816</td>
<td>1½</td>
<td>1.50</td>
<td>700</td>
<td>380</td>
</tr>
</tbody>
</table>

**THERMAL PERFORMANCE – INSTALLED**

<table>
<thead>
<tr>
<th>Type</th>
<th>Thickness</th>
<th>R-value</th>
<th>Mean Temperature °F</th>
<th>°C</th>
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<tbody>
<tr>
<td>812</td>
<td>1½</td>
<td>1.50</td>
<td>300</td>
<td>150</td>
</tr>
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<td>813</td>
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<td>400</td>
<td>204</td>
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<tr>
<td>814</td>
<td>1½</td>
<td>1.50</td>
<td>500</td>
<td>260</td>
</tr>
<tr>
<td>815</td>
<td>1½</td>
<td>1.50</td>
<td>600</td>
<td>320</td>
</tr>
<tr>
<td>816</td>
<td>1½</td>
<td>1.50</td>
<td>700</td>
<td>380</td>
</tr>
</tbody>
</table>

**THERMAL PERFORMANCE – INSTALLED**

<table>
<thead>
<tr>
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<th>R-value</th>
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</thead>
<tbody>
<tr>
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<td>1½</td>
<td>1.50</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>813</td>
<td>1½</td>
<td>1.50</td>
<td>400</td>
<td>204</td>
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<tr>
<td>814</td>
<td>1½</td>
<td>1.50</td>
<td>500</td>
<td>260</td>
</tr>
<tr>
<td>815</td>
<td>1½</td>
<td>1.50</td>
<td>600</td>
<td>320</td>
</tr>
<tr>
<td>816</td>
<td>1½</td>
<td>1.50</td>
<td>700</td>
<td>380</td>
</tr>
</tbody>
</table>

**MICROFLEX**

- Fiber Glass Duct Wrap
- Precipitator Spin-Glas Insulation
- Micro-Flex™

**Fiber Glass Duct Wrap**

- 800 Series Spin-Glas®
- 800 Series Spin-Glas® Insulation
- 1000 Series Spin-Glas®
- 1000 Series Spin-Glas (Boards)

**Fiber Glass Duct Wrap**

- 800 Series Spin-Glas®
- 800 Series Spin-Glas® Insulation
- 1000 Series Spin-Glas®
- 1000 Series Spin-Glas (Boards)

**Fiber Glass Duct Wrap**

- 800 Series Spin-Glas®
- 800 Series Spin-Glas® Insulation
- 1000 Series Spin-Glas®
- 1000 Series Spin-Glas (Boards)
### Performance Characteristics

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Working Temperature Limit</th>
<th>Insulation Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 Series Spin-Glas®</td>
<td>High-performance fiberglass blanket, designed for heating, air conditioning and processes applications.</td>
<td>-4°F to 600°F (-20°C to 315°C)</td>
<td></td>
</tr>
<tr>
<td>Fabrication Board</td>
<td>Semi-rigid fiberglass insulation board, suited for application on rounded shapes such as pipes, tanks, ducts and vessels.</td>
<td>Operating Temperature Limit: 850°F (454°C)</td>
<td></td>
</tr>
<tr>
<td>HTB 26 Spin-Glas®</td>
<td>Compact fiberglass blanket, designed for insulating irregular surfaces.</td>
<td>Operating Temperature Limit: 750°F (399°C)</td>
<td></td>
</tr>
<tr>
<td>MicroFlex®</td>
<td>Semi-rigid fiberglass insulation, designed for heating, air conditioning and processes applications.</td>
<td>Operating Temperature Limit: 700°F (371°C)</td>
<td></td>
</tr>
</tbody>
</table>

### Specification Compliance

- **ASTM E84** (Noncombustible)
- **UL 723**
- **NFPA 255**
- **ASTM C1136**
- **ASTM C795**
- **ASTM C553**, Type III
- **CAN/ULC S102-M88**
- **HH-I-558B**, Form A, Classes 1, 2 and 3
- **USCG 164.009**
- **NYC MEA # 360-03-E**
- **NYC MEA # 40-75-M**
- **MIL-I-22023D**, Type I and II, Class 3
- **MIL-I-24244B**
- **HH-I-558C**, Form B, Type I, Class 8

### THERMAL CONDUCTIVITY ("k")

<table>
<thead>
<tr>
<th>Type</th>
<th>Density Thickness</th>
<th>R-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 Series Spin-Glas®</td>
<td><strong>Type I – AP Facing</strong></td>
<td><strong>Type II – AP and FSK Facing</strong></td>
</tr>
<tr>
<td>Fabrication Board</td>
<td><strong>Type I</strong></td>
<td><strong>Type II</strong></td>
</tr>
<tr>
<td>HTB 26 Spin-Glas®</td>
<td><strong>Type 75°F 24°C</strong></td>
<td><strong>Type 75°F 24°C</strong></td>
</tr>
<tr>
<td>MicroFlex®</td>
<td><strong>Type I</strong></td>
<td><strong>Type II</strong></td>
</tr>
</tbody>
</table>

### Micro-Flex™

- High-performance fiberglass blanket, designed for insulating irregular surfaces.
- Compressible for easy installation.
- Designed for the exterior of HVAC systems or other spaces where moisture is not a concern.
- Ideal for insulation of round ducts, chillers or process equipment.

### Microlite® XG™

- High-performance fiberglass blanket, designed for insulating irregular surfaces.
- Compressible for easy installation in round ducts.
- Ideal for insulation of round ducts, chillers or process equipment.

### Formaldehyde-Free™

- Designed for use in commercial and industrial HVAC, power and process applications.
- Suitable for use on equipment in commercial and industrial HVAC, power and process applications.
- Available in ½” (13 mm) increments.

### Icon Key

- **Thermal**
- **Acoustical**
- **Fire Resistance**
- **Moisture Control”
- **Formaldehyde-free™**
- **Environmental Quality”

---

For more information, visit us at specJM.com
**THERMAL CONDUCTIVITY ("k")**

<table>
<thead>
<tr>
<th>Type</th>
<th>Density Thickness</th>
<th>Density in kg/m³</th>
<th>Mean Temperature °F °C</th>
<th>Operating Temperature Limit °F°C</th>
<th>NRC</th>
<th>Mean Temperature °F °C</th>
<th>Operating Temperature Limit °F°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTB 26 Spin-Glas® (Rolls)</td>
<td>1000 SSG</td>
<td>0.23* 0.033**</td>
<td>812 0.24* 0.035**</td>
<td>815 0.22* 0.032**</td>
<td>1.36</td>
<td>815 4.25 68 1–2½ 25–64</td>
<td>817 6.00 96 1–2 25–51</td>
</tr>
<tr>
<td>1000 Series Spin-Glas® (Boards)</td>
<td>800 Series Spin-Glas®</td>
<td>0.22* 0.032**</td>
<td>300 1½ 38 2.9 0.74 850°F (454°C)</td>
<td>305 1½ 38 4.5 0.79 850°F (454°C)</td>
<td>1.36</td>
<td>305 7.4 100 1–2½ 25–102</td>
<td>310 11.3 1219 1–2½ 25–102</td>
</tr>
<tr>
<td>Precipitator Spin-Glas® (Boards)</td>
<td>800 Series Spin-Glas®</td>
<td>0.25* 0.036**</td>
<td>500 1½ 38 4.5 0.79 850°F (454°C)</td>
<td>505 1½ 38 6.00 0.92 850°F (454°C)</td>
<td>1.36</td>
<td>505 11.9 1219 1–2½ 25–102</td>
<td>510 15.2 2438 1–2½ 25–102</td>
</tr>
<tr>
<td>800 Series Spin-Glas® (Boards)</td>
<td>800 Series Spin-Glas®</td>
<td>0.27* 0.039**</td>
<td>100 1½ 38 2.9 0.74 850°F (454°C)</td>
<td>105 1½ 38 4.5 0.79 850°F (454°C)</td>
<td>1.36</td>
<td>105 7.4 100 1–2½ 25–102</td>
<td>110 11.3 1219 1–2½ 25–102</td>
</tr>
</tbody>
</table>

**THERMAL PERFORMANCE CHARACTERISTICS**

For more information, visit us at specJM.com.
Fiber Glass Insulation

Pipe & Equipment Insulations

Product Selector Guide

Microlok® HP
High-Performance Fiber Glass Pipe Insulation

Zeston® 500 PVI
Insulated Fitting Covers and Jacketing

Zeston® 500 Series PVC
Fitting Covers and Jacketing for Industrial Use

Check for current availability.

Operating Temperature Limit:
2 in. (50 mm) increments.

Operating Temperature Limit:
0°F to 850°F (-18°C to +454°C)

Operating Temperature Limit:
0°F to 450°F (-18°C to +232°C)

Operating Temperature Limit:
0°F to 150°F (-18°C to +66°C)

Operating Temperature Limit:
USCG 164.109/56/0 - Complies; Certification Pending

Thermal Conductivity of Hi-Lo® Temp Fiber Glass Insulation Insert

Thermal Conductivity (Btu•in/(hr•ft•°F))

Thickness:

°F
°C

0.24
0.035
68
15
0.28
0.040
93
20
0.34
0.049
149
35
0.44
0.063
204
45
0.55
0.079
260
55
0.75
0.11
295
75
0.87

Pipe & Equipment Insulations

Material:

Microlok® HP insulation is designed for use on commercial, power or process lines.

Microlok® HP insulation is available in 2 in. (50 mm) increments.

Microlok® HP insulation is available in thicknesses of: 500 260 0.55 0.079
400 204 0.44 0.063
300 149 0.34 0.049
200 93 0.28 0.040
100 38 0.24 0.035

Pipe & Equipment Insulations

Temperature ‘k’

ASTM C795
ASTM C1136
ASTM C585

Pipe & Equipment Insulations

Pipe & Equipment Insulations

Pipe & Equipment Insulations

Pipe & Equipment Insulations
A high performance, 100% pure, high performance fiber glass pipe insulation. Micro-Lok® insulation is designed not for use on commercial, power or process lines.

**Operating Temperature Limit:**
-6°F (-21°C) to +850°F (+454°C)

### Material Properties

**Thermal Conductivity (k):**
- 1.50 W/m°C
- 2.00 W/m°C
- 2.50 W/m°C
- 3.00 W/m°C
- 3.50 W/m°C
- 4.00 W/m°C

**Mean Thicknesses of:**
- 100°F (38°C) increments.

### Operating Temperature Limits

- **Micro-Lok HP:**
  - Operating Temperature Limit: 0°F to 850°F (-18°C to +454°C)
  - THERMAL CONDUCTIVITY OF HI-LO® TEMP FIBER GLASS INSULATION INSERT

### Insulated Fitting Covers and Jacketing

- Zeston® 300 Series PVC:
  - Zeston® 300 Series fitting covers. For use over various types of fabricated insulation fittings and an improved "matched" fit in the fitting throat area provides ease of fabrication in the field not possible with two-piece or two-piece-welded construction. This construction is engineered to accommodate a variety of other fittings, flanges, reducers, end caps, soil pipe hubs, traps and mechanical line accessories.
  - Insert: 0°F to 450°F (-18°C to +232°C)
  - PVC: 0°F to 150°F (-18°C to +66°C)

### Zeston® 300 Series PVC

- These PVC fitting covers and jacketing, when combined, form a completely sealed system, which meets the requirements of the USDA and FDA approval for food-handling and pharmaceutical facilities.
  - Operating Temperature Limit:
    - PVC: 0°F to 150°F (-18°C to +66°C)
  - Insulated Fitting Covers and Jacketing
  - These PVC fitting covers and jacketing are available in many shapes and sizes. Its unique construction provides ease of installation, uniform appearance and long-term insulation and protection.
  - Accessories complete a systems package, which are available both in white and in colors.
  - Features ease of installation, uniform appearance and long-term insulation and protection.
  - Zeston installation accessories include:
    - Z-Tape
    - White, stainless steel, thumb tacks.
  - Zeston 300 Series heavy gauge PVC fitting covers are available both in white and in colors. Made from the same rugged, pliable PVC material, Zeston HP fitting insulation is designed to match the Zeston® 300 Series fitting covers.
  - Two-piece or two-piece-welded construction provides ease of fabrication in the field not possible with two-piece or two-piece-welded construction. This construction is engineered to accommodate a variety of other fittings, flanges, reducers, end caps, soil pipe hubs, traps and mechanical line accessories. This construction is engineered to accommodate a variety of other fittings, flanges, reducers, end caps, soil pipe hubs, traps and mechanical line accessories.
  - Fitting covers, rolls and Cut & Curled® jacketing made from the same rugged, pliable PVC material as Zeston® 300 Series PVC fitting covers. For use over various types of fabricated insulation fittings and an improved "matched" fit in the fitting throat area provides ease of fabrication in the field not possible with two-piece or two-piece-welded construction. This construction is engineered to accommodate a variety of other fittings, flanges, reducers, end caps, soil pipe hubs, traps and mechanical line accessories.
  - Insert: 0°F to 450°F (-18°C to +232°C)
  - PVC: 0°F to 150°F (-18°C to +66°C)
  - PVC fitting covers and Zeston® jacketing are available both in white and in colors. These PVC fitting covers and jacketing, when combined, form a completely sealed system, which meets the requirements of the USDA and FDA approval for food-handling and pharmaceutical facilities.

### Micro-Lok® HP

- A rigid, preformed, one-piece, high-temperature "k" fiber glass pipe insulation.
- Operating Temperature Limit: 0°F to 850°F (-18°C to +454°C)

### Zeston® 300 PVT

- Insulated Fitting Covers and Jacketing

### Zeston® 500 Series PEC

- Fitting Covers and Jacketing for Industrial Use