Description
Zeston 2000 fitting covers are designed to insulate and to provide a protective covering for pipe fittings. The fitting covers are supplied with Hi-Lo® Temp Formaldehyde-free™ fiber glass insulation inserts from the factory. Zeston PVC jacketing provides a protective covering for insulated or bare pipes. Zeston 2000 PVC fitting covers and jacketing are manufactured from high-impact, gloss white, UV-resistant polyvinyl chloride, which provides a simple, quickly installed system.

Available Shapes and Sizes
Fitting Covers. Zeston 2000 Series PVC fitting covers are available for the following: 45° and 90° (0.8 and 1.6 rad.) short- and long-radius elbows, tees, valves flanges, reducers, and caps, soil pipe hubs, traps and mechanical groove-type fittings.

Jacketing. Zeston PVC White and Color jacketing is available in rolls in thicknesses of 10, 15, 20 and 30 mil (0.3, 0.4, 0.5 and 0.8 mm).

Cut & Curled™ Jacketing. Zeston PVC White and Color Cut & Curled jacketing is available in thicknesses of 20 or 30 mil (0.5 mm or 0.8 mm). (30 mil white [0.8 mm] is recommended for outdoor applications.) It is available in factory-cut sizes to fit up to 30’ (762 mm) O.D. All sections of Zeston PVC Cut & Curled jacketing are 48” (1,219 mm) in length and are factory curled to fit snugly.

Uses
Zeston 2000 PVC fitting covers and jacketing are ideally suited for indoor or outdoor use on chilled water, hot water, steam and other piping systems in commercial, institutional and industrial applications. The fitting covers, when combined with Zeston PVC jacketing and Perma-Weld® solvent welding adhesive, form a completely sealed system that meets the requirements of the USDA and FDA for applications in food, beverage and pharmaceutical facilities.

Qualifications for Use
General
• Install the Hi-Lo Temp fiber glass insert by wrapping it completely around the pipe fitting without overly compressing it or leaving any voids. Ensure that the insulation insert covers all exposed surfaces. The Zeston PVC fitting cover should then be installed over the pipe fitting and fiber glass insert by securing the throat using either serrated tacks, Perma-Weld adhesive or Zeston Z-Tape.

Hot Systems
• PVC covers must be kept below 150°F (66°C) by use of proper insulation thickness.
• PVC covers should be kept away from contact with and exposure to sources of direct or radiated heat.
• For fittings where operating temperatures exceed 250°F (121°C) or where pipe insulation thickness is greater than 1½” (38 mm), two or more layers of Hi-Lo Temp insulation inserts are required beneath fitting cover.

Cold Systems
• An approved vapor retarder mastic compatible with PVC must be applied between pipe insulation and fitting cover, and on fitting cover throat overlap seam.
• For fittings where operating temperature is below 45°F (7°C) or where the pipe insulation thickness is greater than 1½” (38 mm), two or more layers of Hi-Lo Temp insulation inserts are required beneath fitting cover.

Operating Temperature Limits:
PVC: Up to 150°F (66°C)
Insert: 0°F to 450°F (-18°C to +232°C)
Flame Spread: 25 or less (up to 30 mil [0.8 mm])
Smoke Developed: 50 or less (up to 30 mil [0.8 mm])
Grade: Weatherable
Color: White
Finish: Gloss

Refrigerant Systems and Cold Systems in Severe Ambient Conditions
• Mitered pipe insulation segments, fabricated or premolded insulation shapes may be used in lieu of Hi-Lo Temp insulation inserts.
• An intermediate vapor retarder compatible with PVC is required to completely seal the insulation prior to installing the Zeston 2000 PVC fitting cover. Care should be taken to ensure that the vapor barrier mastic is applied between the pipe insulation and the fitting cover, and on fitting cover throat overlap seam.

Totally Sealed Systems (USDA Approval)
• System requires that 20 or 30 mil (0.5 mm or 0.8 mm) Zeston PVC jacketing is applied to pipe insulation in conjunction with Zeston PVC fitting covers.
• All circumferential and longitudinal seams of jackets and fitting covers should be sealed with Zeston Perma-Weld solvent welding adhesive. Circumferential seams should be a minimum 1” (25 mm) overlap, and longitudinal seams should be 1½” to 2’ (38 mm to 51 mm) overlap.
• Upon completion, all seams should visually be checked for seal and touched up, if necessary.
• Slip joints are required periodically between fixed supports and on continuous long runs of straight piping. Slip joints are achieved by increasing circumferential overlap to 8’ to 10’ (203 mm to 254 mm) and applying a flexible white caulking in the overlap area to maintain a sealed system.
Physical Properties of Zeston 2000 PVC

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>ASTM Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Gravity</td>
<td>1.48</td>
<td></td>
</tr>
<tr>
<td>Tensile Strength at Yield, psi</td>
<td>6,000 (41,370)</td>
<td>D638</td>
</tr>
<tr>
<td>Elongation at Yield (MD), %</td>
<td>3.0</td>
<td>D638</td>
</tr>
<tr>
<td>Tensile Modulus, psi (kPa)</td>
<td>425,000 (2,930,270)</td>
<td>D638</td>
</tr>
<tr>
<td>Flexural Strength, psi (kPa)</td>
<td>11,000 (75,650)</td>
<td>D638 (min. 0.125 [3 mm] thick specimen)</td>
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<tr>
<td>Flexural Modulus, psi (kPa)</td>
<td>430,000 (2,964,750)</td>
<td>D790</td>
</tr>
<tr>
<td>Flame Spread (white only)</td>
<td>25 or less (up to 30 mil [0.8 mm])</td>
<td>E84</td>
</tr>
<tr>
<td>Smoke Developed (white only)</td>
<td>50 or less (up to 30 mil [0.8 mm])</td>
<td>E84</td>
</tr>
<tr>
<td>Electrical Conductance</td>
<td>Non-Conductor</td>
<td></td>
</tr>
<tr>
<td>Gardner—SPI Impact, in. lb./mil by Ductile Failure</td>
<td>10 mil (0.3 mm) 1.3</td>
<td>D3679 (4 lb. [1.8 kg] weight; 8 lb. [3.6 kg] for 30 mil [0.8 mm])</td>
</tr>
<tr>
<td>in. mil (0.3 mm) 1.3</td>
<td>15 mil (0.4 mm) 1.4</td>
<td></td>
</tr>
<tr>
<td>in. 20 mil (0.5 mm) 1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in. 30 mil (0.8 mm) 1.6</td>
<td></td>
<td></td>
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</tbody>
</table>

Chemical resistance data available on request.

General Properties of Hi-Lo® Temp Formaldehyde-free™ Fiber Glass Insulation Insert

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>ASTM Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal conductivity</td>
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</tr>
<tr>
<td>Mean Temperature</td>
<td>°F</td>
<td>°C</td>
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<tr>
<td>75</td>
<td>24</td>
<td>.28</td>
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<td>66</td>
<td>.34</td>
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<tr>
<td>300</td>
<td>149</td>
<td>.45</td>
</tr>
</tbody>
</table>

Temperature limits 0°F to 450°F (-18°C to +232°C)

Sanitary
Odorless. Will not absorb odors. Provides no food for insects or rodents; will not mildew.

Vibration resistant
Will not settle or separate.

Fire safety
Meets most requirements of federal, state and local codes. Accepted for commercial, institutional, industrial and residential projects in all parts of U.S. The fiber glass inserts have UL 25/50 rating and are noncombustible per ASTM E136.

Specification Compliance
USDA, Agriculture Canada
New York City MEA #7-87
ICBO
SBCCI
BOCA
ASTM D1784, Class 16354-C
L-P-535E*, Composition A, Type II, Grade GU
L-P-1035A, Composition A, Type II, Grade GU
Canada: CGSB 51-GP-53M
CAN/ULC S102-M88

*Impact strength determined by Gardner-SPI test method rather than Izod, since Gardner is more appropriate for PVC sheeting materials.