Description
Johns Manville Zeston® 2000 Series Color standard gauge PVC fitting covers are manufactured from high-impact, polyvinyl chloride material designed to provide abuse-resistant protection for insulated piping. The one piece color fittings are available with or without Hi-Lo® Temp Formaldehyde-free fiber glass inserts. Our wide range of products and accessories enable the contractor to design, fabricate and install a complete system with a quality finished appearance.

Available Shapes and Sizes

Fitting Covers. Zeston® 2000 Series PVC Color fittings are available for the following: 45° and 90° (0.8 and 1.6 rad.) short and long radius elbows, FE (fabricated elbow) fittings, tees and valves, flanges, reducers, end caps, soil pipe hubs, traps and mechanical groove-type fittings.

Companion Zeston® Color Jacketing

Jacketing. Zeston PVC Color jacketing rolls are available in thicknesses of 20 and 30 mil (0.5 and 0.8 mm).

Cut & Curled™ Jacketing. Zeston PVC Color Cut & Curled jacketing is available in thicknesses of 20 or 30 mil (0.5 mm or 0.8 mm). It is available in factory-cut sizes to fit up to 30’ (762 mm) O.D. All sections of Zeston PVC Color Cut & Curled jacketing are 48” (1219 mm) in length and are factory curled to the insulation size to fit snugly.

Applications
Zeston 2000 Series PVC Color fitting covers are ideally suited for indoor use on chilled water, hot water, steam and other piping systems in commercial, institutional, and industrial applications. When combined with Zeston PVC Color jacketing and solvent welding adhesive or Z-tape, 2000 Series Color PVC fitting covers form a completely sealed system that may be used for chilled water applications. The Zeston PVC Color system of fittings and jacketing provide easy identification for different pipe systems. All Zeston Color fittings and jacketing are not recommended for outdoor application.

Qualifications for Use

General
• Install the appropriate 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, or exposure to, sources of direct or radiated heat.
• For fittings where operating temperatures exceed 250°F (121°C), or where pipe insulation thickness is 1½” or greater (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)

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 1½” or greater (38 mm), two or more layers of Hi-Lo Temp insulation inserts are required beneath fitting cover.

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 inches (203 mm to 254 mm) and applying a flexible caulking in the overlap area to maintain a sealed system.
Physical Properties of Zeston 2000 Series Color 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, %</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 (75,850)</td>
<td>D638</td>
</tr>
<tr>
<td>Flexural Modulus, psi (kPa)</td>
<td>430,000 (2,964,750)</td>
<td>D790</td>
</tr>
<tr>
<td>Electrical Conductance</td>
<td>Non-Conductor</td>
<td></td>
</tr>
<tr>
<td>Flame Spread</td>
<td>25 or less</td>
<td>*ASTM E84</td>
</tr>
<tr>
<td>Smoke Developed</td>
<td>50 or less</td>
<td>*ASTM E84</td>
</tr>
<tr>
<td>Gardner—SPI Impact, in. lb./mil by Ductile Failure</td>
<td>20 mil (0.5 mm) 1.5</td>
<td>D3679 (4 lb. [1.8 kg] weight; 8 lb. [3.6 kg] for 30 mil [0.8 mm])</td>
</tr>
<tr>
<td></td>
<td>30 mil (0.8 mm) 1.6</td>
<td></td>
</tr>
</tbody>
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Chemical resistance data available on request.

*Standard test method for surface burning characteristics of building materials.

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

<table>
<thead>
<tr>
<th>Compressed Thermal conductivity</th>
<th>Mean Temperature °F °C</th>
<th>Btu•in/ (hr•ft•°F) W/m•°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>24</td>
<td>0.23</td>
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<tr>
<td>150</td>
<td>68</td>
<td>0.27</td>
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<tr>
<td>300</td>
<td>149</td>
<td>0.4</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 E84 25/50 rating and are noncombustible per ASTM E136.

Available Colors

- Black
- Tan
- Light Green
- Light Blue
- Red
- Pink
- Grey
- Brown
- Dark Green
- Dark Blue
- Purple
- Orange
- Yellow

Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of Zeston 2000 Color PVC listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you for current information.

All Johns Manville products are sold subject to Johns Manville’s standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit www2.jm.com/terms-conditions or call (800)654-3103.