

# ZeroPerm Ultra

## ZeroPerm Vapor Barrier Membrane

### INSTALLATION INSTRUCTIONS

ZeroPerm Ultra is the high performance insulation jacketing by Polyguard Products, Inc., a leader in laminating and weather and vapor barrier jacketing and corrosion control products used in a wide range of commercial and industrial applications. You'll find ZeroPerm Ultra jacketing easy to install.



### ALL APPLICATIONS

#### AMBIENT CONDITIONS

ZeroPerm Ultra should be applied at temperatures of 10° F (-12° C) or above. It cannot be applied during precipitation, very high humidity, or high wind conditions.

#### SURFACE CONDITION

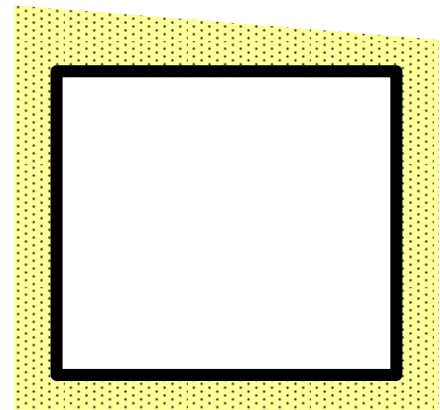
ZeroPerm Ultra is not intended to be used as a mechanical fastening system for the insulation. Before applying ZeroPerm Ultra cladding, insulation must be securely attached to the piping or ductwork according to insulation manufacturer's installation instructions or job specifications. Surface must be clean and dry, free of dust and lubricants and the surface of the insulation should be as smooth and flat as possible, minimizing surface protrusions, depressions, and uneven joints.

#### GENERAL APPLICATION PRACTICES

Peel back the release paper; expose the minimum area of acrylic adhesive needed to make the initial attachment. After alignment, continue to remove the release paper and adhere the sheet smoothly, without wrinkles. Using a tape squeegee or laminate roller, press down the ZeroPerm Ultra jacket smoothly, moving from the center, outward and upward. Once pressed down, ZeroPerm Ultra cannot be moved!

A minimum of 3 inch (76 mm) overlap is required for sealing to achieve adequate weather and vapor resistance. When tape is used to seal butt joints on pipe sections, 1-1/2" (38 mm) overlap on both sides is acceptable. Extra care must be taken to press down smoothly and firmly on the tape.

On horizontal overlap joints, the edge of the overlaying section must face down. Flat horizontal surfaces of ducts should be sloped or peaked slightly to prevent water from ponding on the surfaces.



#### ROUND DUCT INSULATION & PIPE INSULATION

##### STRAIGHT RUNS

For straight runs, cut sections of ZeroPerm Ultra jacketing to a length equal to the circumference of the insulation plus 3 inches (75 mm). Overlap the circumferential seam 3 inches (75mm), and the longitudinal seam 3 inches (75 mm), with the overlap tail facing down.

##### FITTINGS AND PENETRATIONS

For fittings, penetrations, and appurtenances, standard insulation trade practices for jacketing apply to ZeroPerm Ultra; fittings can be two-piece, gored, or spiral wrapped. Cut strips of ZeroPerm Ultra to the required shapes and widths using a template (if a large quantity of fittings exists) or your fabrication tools. Standard fitting and gore charts will work if you calculate in the necessary overlaps.

# ZeroPerm Ultra

## RECTANGULAR DUCT

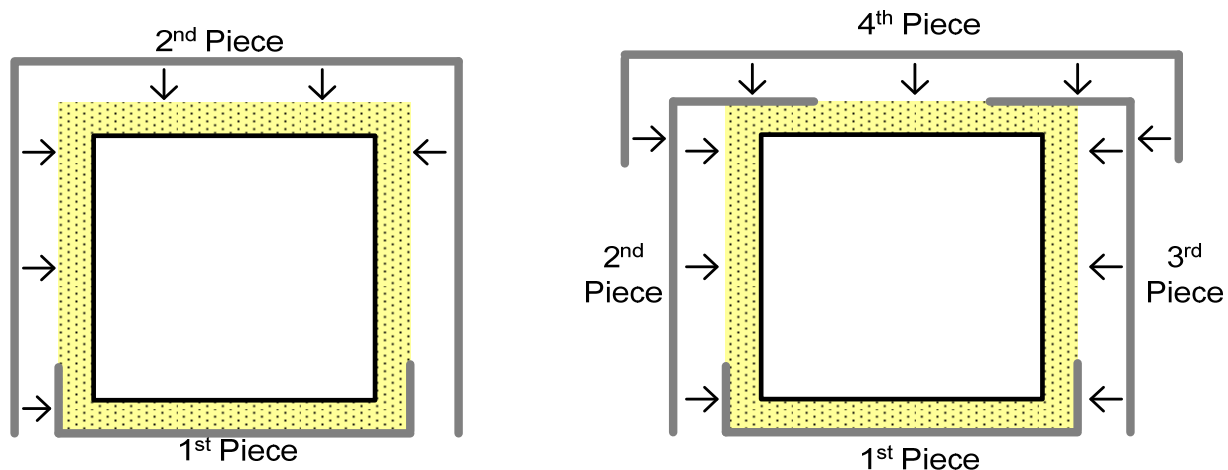
### STRAIGHT RUNS

Cut the bottom section of ZeroPerm Ultra jacketing to a length equal to the width of the insulation plus 8 inches (203 mm). This is to allow for a 4 inch (100 mm) lap up the side sections. Apply to the underside portion of the duct first.

Depending on the duct size, you can cut a section of ZeroPerm Ultra to length equal to the remaining sides and top of the duct. Apply this piece up one vertical side of the duct, across the top of the duct and down the other side of the duct.

If the duct is too wide to facilitate installation in two pieces, cut two pieces of ZeroPerm Ultra the length of the vertical side plus 4 inch (100 mm) lap. Starting at the bottom of the duct, align the piece with the bottom corner of the duct and install up the side, lapping the 4" over onto the top of the duct. The top 'cap' is applied by cutting a piece the width of the duct plus 8 inches (203mm). This piece is installed across the top with a 4" lap down each side of the duct. (a string line or chalk line could be useful during this portion of the installation)

Repeat this procedure for all adjoining sections, overlapping adjacent sections 3 inches (76 mm).



**WATERSHED (not shown) MUST BE PRESENT TO PREVENT WATER PONDING**

### BENDS AND DIRECTION CHANGES

Follow the general application guidelines, taking care to assure adequate overlap of adjoining sections and coverage of all seals. Typically, some variation of the straight run procedure is appropriate.

### REDUCERS

Start with the angled transition area first. Follow the basic procedure outlined for installing ZeroPerm Ultra jacketing, except that the sections will have to be cut to match the shape of the angled duct sides. Apply these sections first.

For the larger side of the reduction, follow the procedure for straight runs, overlapping 3 inches (75mm) onto the previously applied angled sections. Apply these sections second.

For the smaller side of the reduction, follow the procedure for straight runs, overlapping the previously applied angled duct sides. Apply these sections last.

Cut strips of ZeroPerm Ultra to at least a 3 inch (75 mm) width. Seal all joints on the with ZeroPerm Ultra strips so that a minimum of 1-1/2 inches (38 mm) coverage is achieved on all sides of a joint. Alternatively, 3 or 4 inch (75 or 100 mm) ZeroPerm Ultra tape or 2 mil foil tape may be used.

**FOR INSTALLATIONS AND CIRCUMSTANCES NOT DESCRIBED IN THESE INSTRUCTIONS, CONTACT YOUR SPECIFIER OR POLYGUARD FOR TECHNICAL ASSISTANCE., AND FOR WARRANTY DETAILS. WARRANTY INFORMATION, AND INSTALLATION RECOMMENDATIONS. POLYGUARD RECOMMENDS ALUMAGUARD BE INSTALLED WHERE VAPOR BARRIER AND WEATHER BARRIER ARE REQUIRED.**