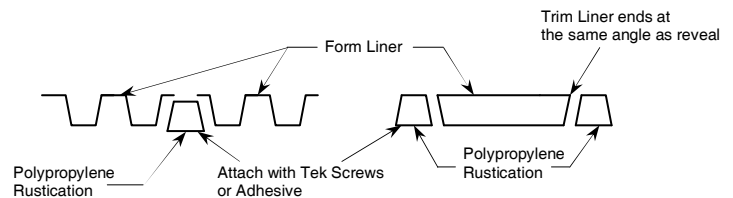
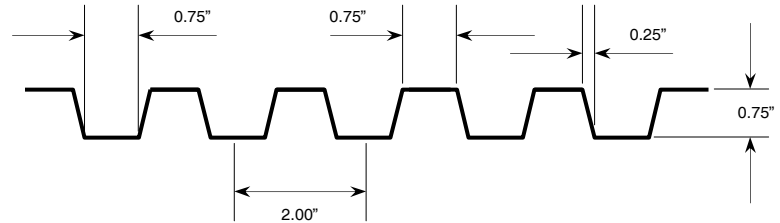


**TRAPEZOID**

**3/4" DEEP 2" O.C.**

**1104**

| TECHNICAL DATA  |           |             |
|---|-----------|-------------|
| Trapezoid 1104 HIPS<br>High Impact Polystyrene Plastic          |           |             |
| Properties  | Rating    | ASTM        |
| IZOD Impact, ft.-lbs./in.                                       |           |             |
| @ 70° F   | 2.0       | D256        |
| @ 0° F  | 1.3       | D256        |
| Tensile Strength  | 3,700 psi | D638        |
| Heat Deflection   | 188       | D695        |
| Vicat Softening   | 212       | D1525       |
| Wt.lb./sq.ft.   |           |             |
| .070 mil  | .449      |             |
| .090 mil  | .577      |             |
| .110 mil  | .705      |             |
| .130 mil  | .833      |             |
| .150 mil  | .966      |             |
| Trapezoid 1104 ABS<br>Acrylonitrile-butadiene styrene           |           |             |
| IZOD Impact, ft.-lbs./in.                                       |           |             |
| @ 73°   | 5.6       | D256        |
| @ 0°  | 1.9       | D256        |
| Tensile Strength, 73° F, psi                                    |           |             |
| Yield   | 5,300     | D638        |
| Modulus   | 330,000   | D638        |
| Flexural Strength 73° F, psi                                    |           |             |
| Yield   | 9,300     | D790        |
| Modulus   | 325,000   | D790        |
| Heat Deflection   |           |             |
| @ 264 psi   | 199       | D648        |
| @ 66 psi  | 211       | D648        |
| Hardness (Rockwell R) 73° F                                     | 105       | D785        |
| Falling Dart Impact, ft.-lb.                                    |           |             |
| @ 73° F   | 23        |             |
| @ 40° F   | 14        |             |
| Specific Gravity  | 1.05      | D792        |
| Wt. lb./sq.ft.  |           |             |
| .070 mil  | .451      |             |
| .090 mil  | .580      |             |
| .110 mil  | .705      |             |
| .130 mil  | .833      |             |
| .150 mil  | .961      |             |
| Trapezoid 1104 PE<br>Polyurethane Elastomer                     |           |             |
| Shore A Hardness  | 45-50     | D2240       |
| Tear Strength, PLI  | 55        | D624        |
| Tensile Strength, psi   | 500       | D638 (D412) |
| Ultimate Elongation   | 240%      | D638 (D412) |
| Trapezoid 1104 PPE<br>Premium Polyurethane Elastomer            |           |             |
| Shore Hardness  | 60-65     | D2240       |
| Tear Strength, PLI  | 120       | D624        |
| Tensile Strength, psi   | 1150      | D638 (D412) |
| Ultimate Elongation   | 1200%     | D638 (D412) |
| <b>Manufacturing Tolerances @70°F</b>                           |           |             |
| Length: +1" to 2", -0" (shipped long to allow field trimming)   |           |             |
| Width: ± 1/4"   |           |             |
| Thickness @ edges ± 1/16" (except formliners over 1" thickness) |           |             |



**Attachment to Formwork**

Thermoform Formliners can be used in precast, tilt-up or cast-in-place applications. Single-use HIP is most frequently used for tilt-up applications and can be installed using Tek drywall screws or pneumatic staplers, spacing should be approximately 6" to 12" on center around the perimeter and 18" to 24" through the center. Double Sided Tape, "Formica Top" adhesive, Heavy Duct Tape or Silicone Caulk are all the common ways to attach formliners. Make sure all surfaces are clean, dry and free of dust and debris. Formliner PE & PPE liners are attached from the back with 3/8" bolts when optional T-nuts are installed.

**Form Placement**

It is important that forms for architectural concrete be aligned and in common planes. A "Stack up" of manufacturing tolerances can result in forms being in different planes, even when properly aligned. This creates a noticeable "step" in the finished surface, particularly with shallow Formliner patterns.

**Rustication**

Reveals or rustications are recommended at butted joints so it will allow the features of the liner to appear continuous. All butted joints should be taped and/or caulked to reduce grout leakage.

**Form Release**

Formliners should be sprayed with high end form release agent before each use and within the same day that concrete is placed. Apply with low flow, wide angle, flat spray nozzle and wipe with a cloth to insure a complete even coat to the entire formliner surface.