Typical Application:
Multilayer Hot Melt Adhesive / 1059B Tyvek® is a medical grade packaging coated Tyvek® heat sealable material for LDPE, HDPE, and Metallocene pouches. 1059B Tyvek® provides a tough tear resistant, breathable, pouching or header bag stock with sterile barrier properties. A non-toxic, multilayered, water based hot melt heat sealable adhesive system, which is designed to heat seal to LDPE, HDPE, and Metallocene pouches and header bags, is applied in a design coat pattern so that there is only adhesive in the seal areas of the pouch or header bag. This means that the breathability of the Tyvek® is not affected by an adhesive coating. This could mean more effective sterilization and no adhesive will come into contact with the medical device in the package. The adhesive provides a strong but peelable seal, which transfers to the seal area of the LDPE, HDPE or Metallocene pouch or header bag. The lidding material is radiation and ETO sterilizable. The lidding material is unaffected by moisture.

Functional Characteristics:
- Highest possible porosity, while still being a bacterial barrier
- Unaffected by moisture
- Consistent coating weight because of multiple layers
- Consistent peel values
- No adhesive contact with medical device

Physical Property Values:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Unit of Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesive Coating Weight (In adhesive coated area)</td>
<td>7.5 nominal</td>
<td>lbs / ream</td>
</tr>
<tr>
<td></td>
<td>12 nominal</td>
<td>gm / sq m</td>
</tr>
<tr>
<td>Tyvek® Weight</td>
<td>39</td>
<td>lbs / ream</td>
</tr>
<tr>
<td></td>
<td>64</td>
<td>gm / sq m</td>
</tr>
<tr>
<td>Gurley Hill Porosity (from DuPont data)</td>
<td>8-36</td>
<td>seconds</td>
</tr>
<tr>
<td>Bond Strength to LDPE, HDPE, or Metallocene Film (180°)</td>
<td>average &gt; 1.75</td>
<td>lbs / inch width</td>
</tr>
<tr>
<td></td>
<td>average &gt; 313</td>
<td>gm / cm width</td>
</tr>
<tr>
<td></td>
<td>(minimum 1.25)</td>
<td>lbs / inch width</td>
</tr>
</tbody>
</table>

Additional Properties:
Toxicity - The adhesive has passed U.S.P. Class VI toxicity testing and evaluation

Sterilization - The pouch and header bag material is suitable for ETO and radiation sterilization

Moisture stability - Unaffected by moisture

Contamination of Medical Device- With the adhesive only applied in the seal area and with the capability to “trap” the adhesive under the seal area, there is no chance of contamination of the medical device by the adhesive.

Maximum Porosity- With adhesive only applied in the seal area, the porosity of the Tyvek is not affected and speed of sterilization is at the maximum possible for Tyvek.

Suitability - It is the responsibility of the purchaser to determine the suitability of the product for specific applications.

Heat Sealing:
The guidelines were developed using a laboratory heat sealer. Production equipment may vary because of variations in the equipment, such as the initiation of dwell time and coatings or lack of coating on the heat seal equipment.

The material was found to have sealed at 1.0 – 4.0 seconds, with the heat seal temperatures ranging from 265°F to 290°F. Pressures were varied from 40 psi to 70 psi.
Optimum sealing parameters on laboratory heat sealer:
Temperature  270°F
Pressure   50 psi
Dwell time  2.0 seconds

Care should be taken to ensure that the lidding material is not over sealed or under sealed.

Over sealing- Too much temperature, pressure and/or dwell time can cause over sealing. This will drive the adhesive into the porous Tyvek, which reduces the amount of adhesive at the surface line. This is usually seen as a transparentizing of the Tyvek, and can cause warpage of the seal flange.

Under sealing- Too little temperature, pressure and/or dwell time can cause undersealing. This is usually seen as an insufficient bond strength or an inadequate “footprint” of the adhesive on the seal area of the tray.

Heat seal strength is 98% after 5 minutes and reaches maximum after 24 hours.