Release Film

**TPX™ release film with the pliability to closely follow substrate surfaces**

TPX™ release film maintains a superb balance of heat resistance and releasability, and can be applied to complex, uneven surfaces. Used to produce flexible printed circuits (FPC), TPX™ release film improves yield and productivity in factories around the world. Further, TPX™ is used in a variety of high performance applications including food wrap and release film to produce advanced materials.

**Benefits of Using TPX™**

- **Releasability**: TPX™ has excellent releasability which improves yield and productivity.
- **Heat Resistance**: TPX™ has a melting point of 220 °C to 240 °C and can be used in high temperature production processes.
- **Gas Permeability**: TPX™ features higher gas permeability than other resins due to its unique molecular structure. When product freshness is critical, packaging film produced with TPX™ is an excellent choice.

**Case Studies**

- **Release film for the production of Flexible Printed Circuits (FPC)**
- **Release film for a variety of advanced materials**
- **Heat Resistant Wrap**

**Mitsui Chemicals, Inc.**

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Release Film

Releasability
TPX™ surface tension is equivalent to that of PTFE, and offers excellent releasability.

Heat Resistance
TPX™ film has high heat resistance and can be used for food wrap or as an industrial film.

<table>
<thead>
<tr>
<th>Heat Resistance Comparison</th>
<th>Melting Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPX™</td>
<td>220°C~240°C</td>
</tr>
<tr>
<td>PVDC</td>
<td>140°C</td>
</tr>
<tr>
<td>PE</td>
<td>110°C</td>
</tr>
</tbody>
</table>

TPX™ can withstand oily mayonnaise.

- **Before heating:** Cover a glass container with wrap and place mayonnaise over it.
- **For wrap after heating for 120 seconds:** The mayonnaise melted but the wrap did not tear.

Gas Permeability
TPX™ has excellent gas permeability because of its molecular structure. Although TPX™ is an imperforate film, it features gas permeability equivalent to microporous film.

<table>
<thead>
<tr>
<th>Type</th>
<th>PS</th>
<th>PP</th>
<th>PC</th>
<th>LLDPE</th>
<th>PET</th>
<th>PVC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17000</td>
<td>1000</td>
<td>900</td>
<td>800</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

Product / Processing Guide

<table>
<thead>
<tr>
<th>Type</th>
<th>Grade</th>
<th>C1 [°C]</th>
<th>C2~C5 [°C]</th>
<th>AD [°C]</th>
<th>Dice C1 [°C]</th>
<th>Resin Temperature [°C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Rigidity</td>
<td>RT18</td>
<td>280</td>
<td>290~300</td>
<td>300</td>
<td>300~310</td>
<td>310</td>
</tr>
<tr>
<td>Moderate Rigidity</td>
<td>MX004</td>
<td>270</td>
<td>280~290</td>
<td>290</td>
<td>290~300</td>
<td>300</td>
</tr>
<tr>
<td>Low Rigidity</td>
<td>MX002</td>
<td>260</td>
<td>270~280</td>
<td>280</td>
<td>280~290</td>
<td>290</td>
</tr>
</tbody>
</table>

Molding Machine
Device: T die-cast film-forming machine/Die: opening length: 600 mm/Screw: φ50 mm, L/D = 28, C/R = 3.0 (barrier screw type)/Chill roll temperature: 60°C

The data described in this leaflet are representative examples of measurement values obtained using our test methods. The described data and evaluations are not guaranteed. Prior to application to your products, please evaluate the practicality and confirm that there are no problems.