Non-Heat Sealable Clear
BOPP Film

OPLAR
NCL (A02) Converting Grade

OPLAR-NCL A02 grade is Non-Heat Sealable Clear BOPP Film for use in printing and lamination applications. The corona treated side is specifically designed for excellent adhesion of inks and lamination adhesives.

Product Features
- High surface gloss
- Good optical properties
- Good mechanical properties
- Good surface treatment retention

Typical Applications
- Printing and lamination
- Cold seal application

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<tr>
<th>Properties</th>
<th>Unit</th>
<th>Test Method</th>
<th>15</th>
<th>18</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Thickness</td>
<td>Micron</td>
<td>Internal</td>
<td>15</td>
<td>18</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>Grammage</td>
<td>g/m²</td>
<td>ASTM D 1505</td>
<td>13.7</td>
<td>16.4</td>
<td>18.2</td>
<td>22.8</td>
<td>27.3</td>
<td>31.9</td>
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<tr>
<td>Yield</td>
<td>m²/kg</td>
<td>Internal</td>
<td>73.3</td>
<td>61.1</td>
<td>54.9</td>
<td>44.0</td>
<td>36.6</td>
<td>31.4</td>
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<tr>
<td>Density</td>
<td>g/cc</td>
<td>Internal</td>
<td>0.01</td>
<td></td>
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</tr>
</tbody>
</table>

SURFACE PROPERTIES
- Treatment Level: TI/TO dyne/cm
  - ASTM D 2578: 38 38 38 38 38 38
- Haze: %
  - ASTM D 1003: 1.7 1.7 1.8 2 2.5 2.5
- Gloss: ^45°
  - ASTM D 2457: 90 90 90 90 90 90
- Coefficient of Friction: UT/UT Kinetic
  - ASTM D 1894: 0.4 0.4 0.4 0.4 0.4 0.4

MECHANICAL PROPERTIES
- Tensile Strength: MD kg/cm²
  - ASTM D 882: 1300 1300 1300 1300 1300 1300
  - ASTM D 882: 2500 2500 2500 2500 2500 2500
- Tensile Elongation: MD %
  - ASTM D 882: 150 150 150 150 150 150
  - ASTM D 882: 50 50 50 50 50 50
- Elastic Modulus: MD kg/cm²
  - ASTM D 882: 18000 18000 18000 18000 18000 18000
  - ASTM D 882: 28000 28000 28000 28000 28000 28000

THERMAL PROPERTIES
- Shrinkage: MD %
  - Internal: 4 4 4 4 4 4
  - Internal: 2 2 2 2 2 2
- WVT: g/m²/day
  - ASTM F 1249: 9.5 8.5 7.5 7 6.5 6
- OTR: cc/m²/day
  - ASTM D 3985: 2700 2500 2400 2300 2300 2000

BARRIER PROPERTIES
- MD: Machine Direction, TD: Transverse Direction, TI: Treated Inside, TO: Treated Outside, UT: Untreated

Disclaimer: The information provided above is based on SRF FLEXIPAK conclusive tests, which are indicative only and provided as guidelines. Customers are solely responsible for the end use in all respects. Customers should verify the suitability of the film for its end use. SRF FLEXIPAK gives no warranty or accepts liability for any loss and fitness of the product for any specific purpose. SRF FLEXIPAK reserves the right to change the technical data sheet at any time for enhancing the quality of the product without prior information.

Storage Conditions: between 22-30°C & RH 40-60% is recommended in order to minimize the deterioration of the film properties in general. It is advisable to turn out the inventory on FIFO basis. The film should be conditioned in the operating environment for at least 24 hours before processing.