B-TUH-M
High Barrier & Robust Seal Metallized BOPP Film

TUH-M is a high oxygen & moisture barrier metallized film with robust seal performance (high seal strength, hermetic seal, high & broad hot tack, low SIT).

APPLICATIONS:
- Biscuits, bakery & snacks
- Especially designed LUP & MUP packs

THE BIG DIFFERENTIATORS
- Excellent Oxygen & Moisture Barriers
- Robust Seal Performance
- OTM (Over The Mountain) Attribute
- Good Metal Bond
- Unique Value Proposition

KEY FEATURES:
- Excellent oxygen barrier
- Outstanding moisture barrier
- Good metal adhesion & brilliance
- Good extrusion bond & metal cracking
- Robust seal performance
  (Hermetic seal, high seal strength, excellent hot tack)

APPLICATIONS:
- Biscuits, bakery & snacks
- Especially designed LUP & MUP packs
<table>
<thead>
<tr>
<th>PROPERTIES</th>
<th>TEST METHOD (ASTM)</th>
<th>UNIT</th>
<th>TYPICAL VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>THICKNESS</td>
<td>Internal</td>
<td>Micron</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Gauge)</td>
<td>100</td>
</tr>
<tr>
<td>FILM DENSITY</td>
<td>D-1505</td>
<td>gm/cc</td>
<td>0.91</td>
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<tr>
<td>GRAMMAGE</td>
<td>Internal</td>
<td>gm/m²</td>
<td>22.7</td>
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<tr>
<td>YIELD</td>
<td>Internal</td>
<td>m²/kg</td>
<td>44.0</td>
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<tr>
<td></td>
<td></td>
<td>in²/lb</td>
<td>30932</td>
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<tr>
<td>TREATMENT LEVEL</td>
<td>D-2578</td>
<td>dyne/cm</td>
<td>36</td>
</tr>
<tr>
<td>OPTICAL DENSITY (TOLERANCE: +/- 5%)</td>
<td>Internal</td>
<td></td>
<td>2.6</td>
</tr>
<tr>
<td>TENSILE STRENGTH AT BREAK</td>
<td>MD*</td>
<td>kg/cm²</td>
<td>1200</td>
</tr>
<tr>
<td></td>
<td>TD*</td>
<td></td>
<td>2500</td>
</tr>
<tr>
<td></td>
<td>MD*</td>
<td>(KPsi)</td>
<td>17.0</td>
</tr>
<tr>
<td></td>
<td>TD*</td>
<td></td>
<td>35.5</td>
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<tr>
<td>ELONGATION AT BREAK</td>
<td>MD*</td>
<td>%</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>TD*</td>
<td></td>
<td>60</td>
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<tr>
<td>LINEAR SHRINKAGE (max) (5 Minutes at 130°C)</td>
<td>MD*</td>
<td>%</td>
<td>6.0</td>
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<tr>
<td></td>
<td>TD*</td>
<td></td>
<td>3.0</td>
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<tr>
<td>HEAT SEAL INITIATION TEMPERATURE</td>
<td>Internal</td>
<td>°C</td>
<td>95</td>
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<tr>
<td>HEAT SEAL STRENGTH (Min)</td>
<td>Internal</td>
<td>gm/25mm</td>
<td>1500</td>
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<tr>
<td>WATER VAPOUR TRANSMISSION RATE (38°C &amp; 90% RH)</td>
<td>F-1249</td>
<td>gm/m²/day</td>
<td>0.1</td>
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<td></td>
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<td>(gm/100 in²/day)</td>
<td>0.006</td>
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<td>OXYGEN TRANSMISSION RATE (23°C &amp; 0% RH)</td>
<td>D-3985</td>
<td>cc/m²/day</td>
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<td></td>
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<td>(cc/100 in²/day)</td>
<td>0.6</td>
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</table>

Ref no QAD UFLI S/20 – MB 7/1
*MD = MACHINE DIRECTION *TD = TRANSVERSE DIRECTION

**STORAGE & HANDLING**
FLEXMETPROTECT™ does not require special storage conditions. It is recommended to store below 30°C in order to avoid any deterioration of the film surface properties. It is advisable to use the material on FIFO basis. The film should be kept at operating environment for 24 hours before processing. FLEXMETPROTECT™ is best suitable for use within 3 months from date of dispatch.

**FOOD CONTACT**
FLEXMETPROTECT™ complies with EC and FDA regulations. Specific document and MSDS are available on request.

**DISCLAIMER**
It is the responsibility of our customers to determine that their use of our products is safe, lawful, and technically suitable in their intended applications. The technical data sheets are provided for discussion purposes only. The customer may not rely on the data provided for any manufacturing purpose. The values provided in the technical data sheet represent typical values based on the best of our knowledge as of the date when the data was compiled. The data is offered solely to provide possible suggestions for your own experimentation and not as a guarantee for the material supplied. The user is solely responsible for the end use of the product and needs to perform their own tests to confirm the product suitability/compatibility in all respects. Flex provides no warranty and accepts no liability for any loss or fitness of the product for any specific purpose based on the information contained in the technical data sheets. Flex reserves the right to change the technical data sheet at any time without prior notice.

**TDS issued on 01-04-2020. All previous versions of this grade are invalid.**