**TAFMER™ XM**
Propylene based \(\alpha\)-olefin copolymer

TAFMER™ XM is used as a modifier of polypropylene (PP) to improve Heat Seal Initiation Temperature (HSIT) and Transparency.

General characteristics attributed to TAFMER™ XM:
- Low Melting Point for lowering HSIT
- Low Crystallinity and Miscibility with PP for Transparency

**Typical BOPP Structures**

- Single-sided sealability
  - h-PP / PP(Sealable)
  - h-PP : PP homopolymer

- Double-sided sealability
  - PP(Sealable) / h-PP / PP(Sealable)
  - PP(Sealable) = r-PP + TAFMER™ XM
  - r-PP : PP random copolymer

**Lowering HSIT**

Due to low melting point of TAFMER™ XM, HSIT of BOPP film can be lowered. Targeted HSIT can be obtained by adjusting the blend ratio of TAFMER™ XM.
Transparency

Compare to propylene ethylene copolymer (PER), TAFMER™ XM has advantage to conventional PP copolymers in transparency.

Summary

TAFMER™ XM
☑️ Lowers HSIT
☑️ Improves transparency

Basic Properties

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Test Method</th>
<th>Unit</th>
<th>XM-7070</th>
<th>XM-7080</th>
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</thead>
<tbody>
<tr>
<td>MFR(190°C/2.16kg)</td>
<td>ASTM D1238</td>
<td>g/10min</td>
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<td>3.0</td>
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<tr>
<td>MFR(230°C/2.16kg)</td>
<td>ASTM D1238</td>
<td>g/10min</td>
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<tr>
<th>Mechanical Properties</th>
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<tr>
<td>Yielding stress</td>
<td>ASTM D638</td>
<td>MPa</td>
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<tr>
<td>Tensile Strength at Break</td>
<td>ASTM D638</td>
<td>MPa</td>
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<tr>
<td>Elongation at Break</td>
<td>ASTM D638</td>
<td>%</td>
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<tr>
<td>Young's modulus</td>
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<td>MPa</td>
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<td>Surface Hardness (Shore D)</td>
<td>ASTM D2240</td>
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<table>
<thead>
<tr>
<th>Thermal Properties</th>
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<tbody>
<tr>
<td>Melting Point</td>
<td>MCI Method</td>
<td>°C</td>
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</table>

Note: All of the above listed data are representative values, and not specific ones.
FDA
All the monomers and additives used in the above TAFMER™ grade are listed in the “Code of Federal Regulation, title 21 Food and Drugs, Parts 170 to 189” and “FCN (Food Contact Notification)”.

EU Directive
All the monomers and additives used in the above TAFMER™ grade are listed in the EU Directive 2002/72/EC and its amendment 2008/39/EC. The only additives with Specific Migration Limit (SML) are:
- n-Octadecyl 3,5-di-t-butyl-4-hydroxy hydrocinnamate (CAS No.2082-79-3, Ref No.68320)
  - SML= 6mg/kg

Please ensure that the SML and Overall Migration (OM) are within the specified value in the end-use products.

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