

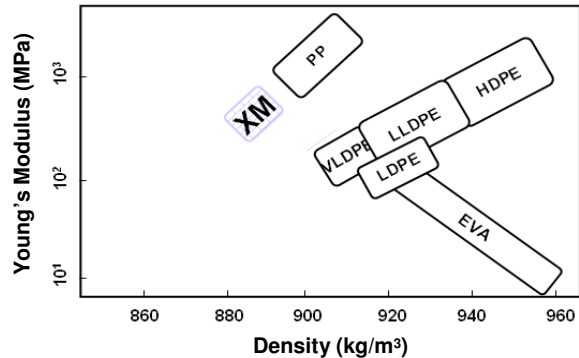
TAFMER™ XM

Propylene based α -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

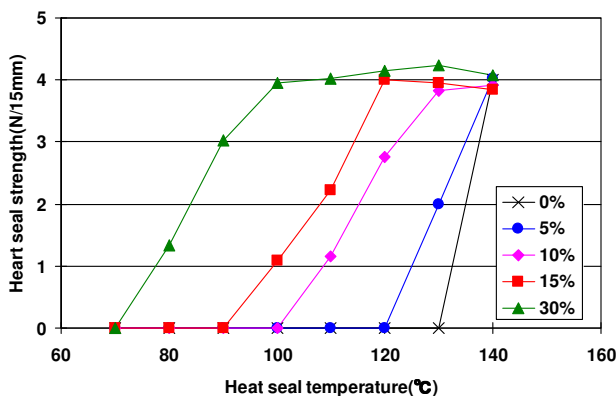


- Double-sided sealability
PP(Sealable) / h-PP / PP(Sealable)

PP(Sealable) = r-PP + TAFMER™ XM
r-PP : PP random copolymer

Lowering HSIT

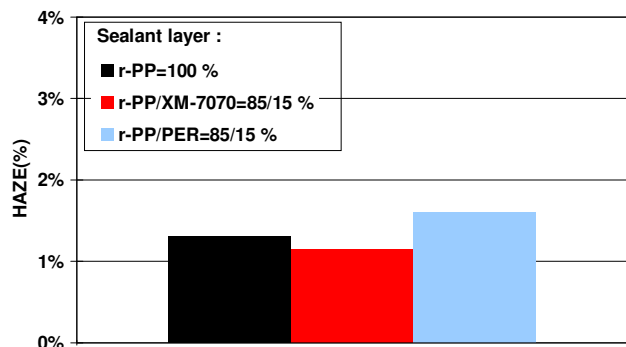
Due to low melting point of TAFMER™ XM, HSIT of BOPP film can be lowered. Targeted HSIT can be obtained by adjusting the blend ratio of TAFMER™ XM.



Layer structure : Three layer
Sealant / Core / Sealant : 1 / 23 / 1 μ m
Core : h-PP:MFR(230 °C)=3 g/10min, Tm=160 °C
Sealant : r-PP / TAFMER™ XM-7070
r-PP : MFR(230 °C)=7 g/10min, Tm=138 °C
Sealing condition : 0.2 MPa x 1 s

Transparency

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



Layer structure : Sealant /Core /Sealant = 1 /23 /1 μ m
 Core : h-PP, MFR(230 °C)=3 g/10min, Tm=160 °C
 Sealant : r-PP, MFR(230 °C)=7 g/10min, Tm=138 °C
 Draw ratio : 5(MD) × 8(TD) times

Summary

TAFMER™ XM

- Lowers HSIT
- Improves transparency

Basic Properties

Physical Properties	Test Method	Unit	XM-7070	XM-7080
MFR(190°C/2.16kg)	ASTM D1238	g/10min	3.0	3.0
MFR(230°C/2.16kg)	ASTM D1238	g/10min	7.0	7.0
Mechanical Properties				
Yielding stress	ASTM D638	MPa	11	14
Tensile Strength at Break	ASTM D638	MPa	34	36
Elongation at Break	ASTM D638	%	750	750
Young's modulus	ASTM D638	MPa	290	390
Surface Hardness (Shore D)	ASTM D2240	—	52	55
Thermal Properties				
Melting Point	MCI Method	°C	75	83

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,.

Disclaimer:

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