TAFMER™ Alpha-olefin copolymer

PE Modification, Stretch Film

Cling Property, Elongation and Transparency

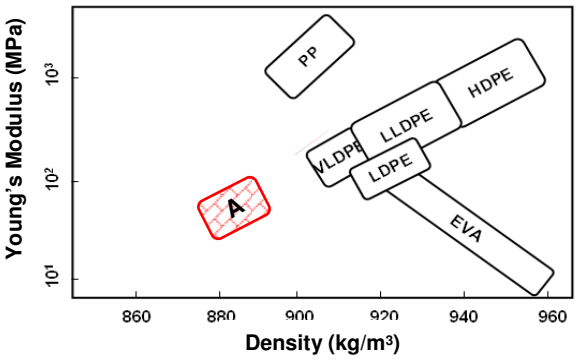
TAFMER™ A

Ethylene based α-olefin copolymer

TAFMER™ A is miscible with polyethylene (PE). It is used as a modifier of PE to improve Cling Property, Flexibility, Elongation and Transparency.

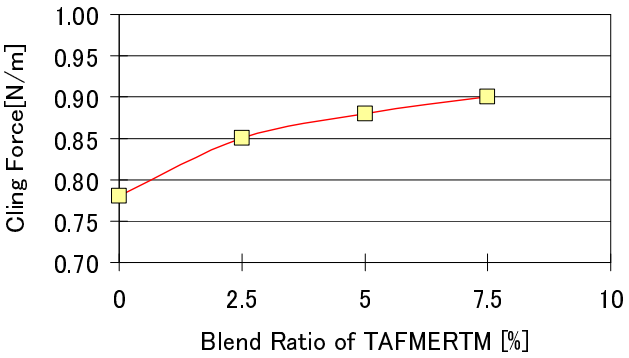
General characteristics attributed to TAFMER™ A:

- Low Young's Modulus
  for Softness and Flexibility
- Low Crystallinity & Miscible with PE
  for Cling Property, Elongation and Transparency



Cling Property

The cling force of PE is not sufficient for practical use.
TAFMER™ A is added to improve cling force.



C4 L-LDPE : MFR(190 ℃)=2 g/10min, D=920 kg/m³
TAFMER™ A-4070S

Film Thickness: 50 μm (Mono Layer, Cast)
Extrusion Temperature: 230 ℃
Cling Force : Peeling Force of two sheets of film together,
Peeling rate : 200 mm/ min.

Film Properties

TAFMER™ A also acts as flexibility, elongation and transparency modifier.

			Contents of A-4070S			
Item	Method	Unit	0% (Only PE)	2.5%	5.0%	7.5%
Young's Modulus	ASTM D638	MPa	180/180	170/170	160/160	150/150
Tensile Strength	ASTM D638	MPa	40/28	40/28	40/28	40/28
Elongation	ASTM D638	%	700/900	710/930	710/940	720/960
Haze	JIS K7105	%	1.8	1.5	1.0	0.9
Gloss 20°	JIS K7105	%	140	143	145	148

Mitsui Chemicals Group
MELS MITSUI ELASTOMERS SINGAPORE PTE LTD

Summary

TAFMER™ A

☑ Improves Cling Property, Flexibility, Elongation and Transparency

Basic Properties

Physical Properties	Test Method	Unit	A-4070S	A-1085S	A-4085S
MFR(190℃/2.16kg)	ASTM D1238	g/10min	3.6	1.2	3.6
MFR(230℃/2.16kg)	ASTM D1238	g/10min	6.7	2.2	6.7
Density	ASTM D1505	kg/m³	870	885	885
Mechanical Properties					
Tensile Strength at Break	ASTM D638	MPa	> 8	> 37	> 27
Elongation at Break	ASTM D638	%	> 1000	> 1000	> 1000
Torsional Rigidity	ASTM D1043	MPa	3	9	9
Surface Hardness (Shore A)	ASTM D2240	–	73	87	86
Thermal Properties					
Melting Point	MCI Method	℃	55	66	66
Brittleness Temperature	ASTM D746	℃	< -70	< -70	< -70

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,.