

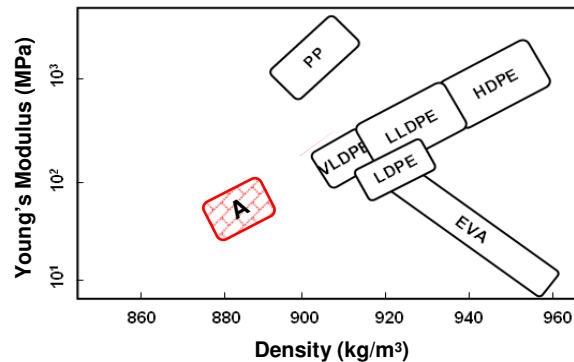
## TAFMER™ A

Ethylene based  $\alpha$ -olefin copolymer

TAFMER™ A is compatible with polypropylene (PP). It is used as a modifier of PP to improve properties such as heat seal initiation temperature (HSIT), impact resistance and flexibility.

General characteristics attributed to TAFMER™ A :

- Low Young's Modulus for Softness and Flexibility
- Low Melting Point for lowering Heat Seal Initiation Temperature (HSIT)
- Low Glass Transition Temperature for Low Temperature Impact strength



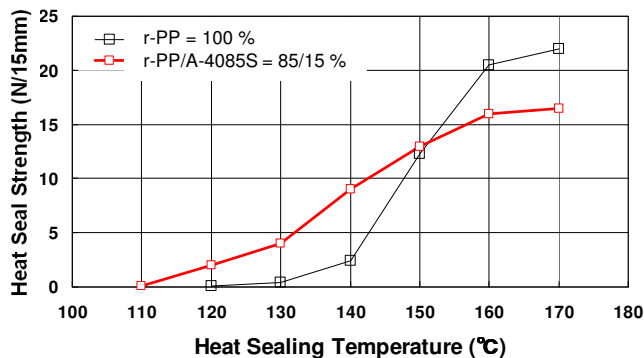
## Typical Application

Sealant Layer e.g. O-PA / CPP

TAFMER™ A can be added to the PP sealant layer.

## Lowering HSIT

Due to low melting point of TAFMER™ A, HSIT is lowered.



r-PP MFR(230 °C)=7 g/10min, T<sub>m</sub>=140 °C  
Film thickness 50  $\mu$ m (Mono Layer)  
Sealing condition: 0.2 MPa x 1 s  
r-PP : PP random copolymer

### Improved Impact Resistance

Due to the low glass transition temperature of TAFMER™A, impact resistance is improved.

		r-PP	r-PP/A-4085S
Blend ratio of TAFMER™	%	0	15
Haze	%	2	3
Gloss	%	110	100
Film Impact	0°C	kJ/m	7
	-10°C	kJ/m	1
Tensile Strength	(MD/TD)	MPa	75 / 50
Elongation	(MD/TD)	%	650 / 700
Young's Modulus	(MD/TD)	MPa	850 / 820
C.O.F	static/kinetic	—	0.35 / 0.26

Low temperature impact resistance is improved by TAFMER™ A.

### Summary

TAFMER™ A

- Lowers HSIT for high speed packing
- Improves impact resistance

### Basic Properties

Physical Properties	Test Method	Unit	A-1085S	A-4085S
MFR(190°C/2.16kg)	ASTM D1238	g/10min	1.2	3.6
MFR(230°C/2.16kg)	ASTM D1238	g/10min	2.2	6.7
Density	ASTM D1505	kg/m <sup>3</sup>	885	885
<b>Mechanical Properties</b>				
Tensile Strength at Break	ASTM D638	MPa	> 37	> 27
Elongation at Break	ASTM D638	%	> 1000	> 1000
Torsional Rigidity	ASTM D1043	MPa	9	9
Surface Hardness (Shore A)	ASTM D2240	—	87	86
<b>Thermal Properties</b>				
Melting Point	MCI Method	°C	66	66
Brittleness Temperature	ASTM D746	°C	< -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,.

#### **Disclaimer:**

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