ExxonMobil

Exceed™ performance PE polymers enhance sealing performance in extrusion coating

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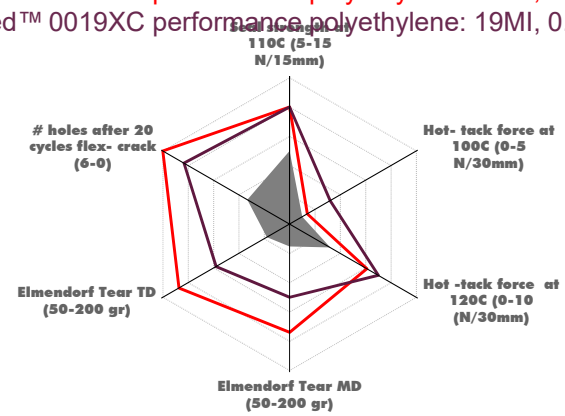
Exceed™ performance polyethylene in extrusion coating

Exceed™ 0015XC performance polyethylene: 15MI, 0.918 density
Exceed™ 0019XC performance polyethylene: 19MI, 0.918 density



Potential

30% Higher seal strength

50% Higher hot-tack force

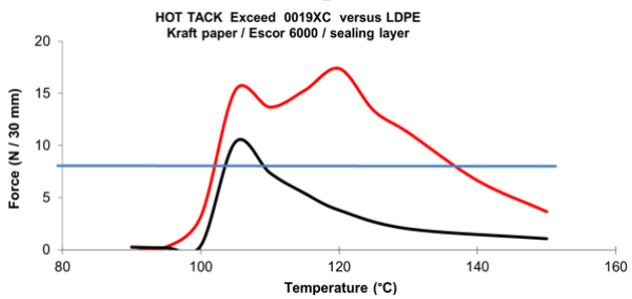
> 100% Tougher coating

Structures produced on EM pilot extrusion coating line
25 gsm polymer coated onto 70 gsm Kraft paper
at 320°C set temp

Data from tests performed by or on behalf of ExxonMobil

Reference	Solution 1	Solution 2
100% ExxonMobil™ LDPE LD258	80% Exceed™ 0015XC 20% ExxonMobil™LDPE LD259	80% Exceed™ 0019XC 20% ExxonMobil™LDPE LD259

Exceed™ performance polyethylene synergy with Escor™ EAA



Potential

>5X Broader hot-tack window

70 % Higher hot- tack force

10-30% Downgauging

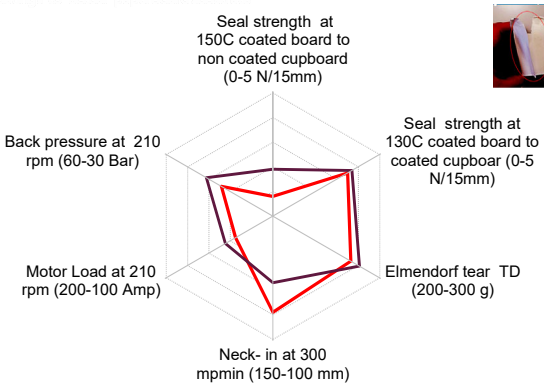
100% ExxonMobil™ LDPE LD258

70% Exceed™ 0019XC performance polymer
30% ExxonMobil™ LDPE LD259

Structures produced on EM pilot extrusion coating line
25 gsm polymer coextrusion coated to 70 gsm Kraft paper
at 280°C set temp

Data from tests performed by or on behalf of ExxonMobil

Exceed™ performance polyethylene for low coating weight



15 MI Exceed™

10 gm
80% Exceed™ 0015XC
20% LD259

19 MI Exceed™

10 gsm
80% Exceed™0019XC
20% LD259

19 MI Exceed™ performance PE

- Higher seal strength
- Less shear in extruder

15 MI Exceed™ performance PE

- Lower neck- in

Structures produced on EM pilot extrusion coating line
10 gsm polymer coated to 300 gsm cupbcoard
at 320°C set temp

Data from tests performed by or on behalf of ExxonMobil

Summary

High MI Exceed™ performance polyethylenes

- Designed for extrusion coating process in blend with LDPE
- Outstanding sealing capability
- Enabling increased toughness and downgauging

Data from tests performed by or on behalf of ExxonMobil

Test item	Test method based on
Elmendorf tear strength	ExxonMobil test method (MEZ 067) based on ASTM D-1922-09
Heat seal of coatings to kraft paper	ExxonMobil test method (MEZ 047-04 & 143-04)
Seal sample preparation on Kopp, for coatings to kraft paper	ExxonMobil test method (MEZ 360)
Hot-tack heat seal mode	ExxonMobil test method (MEZ 003)
Sealing of coatings to cup board substrate	Non EM standard test method, see page notes
# holes after 20 cycles flex crack, # pinholes on coating	ExxonMobil test method (MEZ 232)
Draw-down/ Neck-In/ Extruder motor load / back pressure	ExxonMobil test method (: POTE 0011.000.00)

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"Thank You" for your interest

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