

TOPPAN USA presents NEW SUSTAINABLE Barrier Films at PACK EXPO 2018



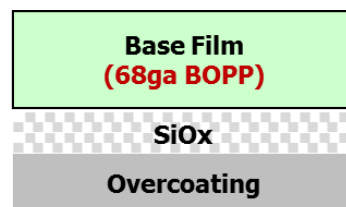
Chicago, October 11, 2018—TOPPAN USA will exhibiting at PACK EXPO INTERNATIONAL 2018. This year, TOPPAN USA will present **New Barrier Films** that corresponds to sustainability needs.

As sustainability demand increases globally, TOPPAN, the world's leading transparent barrier film producer, adds new products to its high barrier film line ups.



1) GL-GP

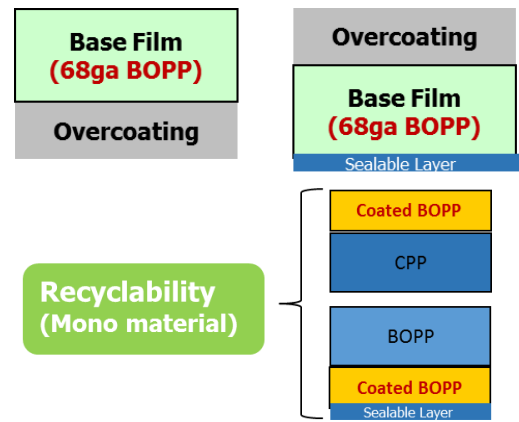
It's the world's highest level transparent barrier film that uses BOPP as a base material. GL-GP is recyclable due to its mono-material structure. TOPPAN's vapor deposition and coating technologies enables the high barrier property, which hasn't been achieved thus far for BOPP based barrier film.



This film has high resistance during converting and distribution process. Its barrier property is comparable to traditional transparent vapor deposition film, thus significantly widens the applications using mono-material packaging.

2) Barrier Coated BOPP

TOPPAN also will present **Barrier Coated BOPP** for a replacement of PVDC and/or EVOH. This achieves the mono-material film that is recyclable, and eco-friendly for chlorine-free material for a reasonable pricing.

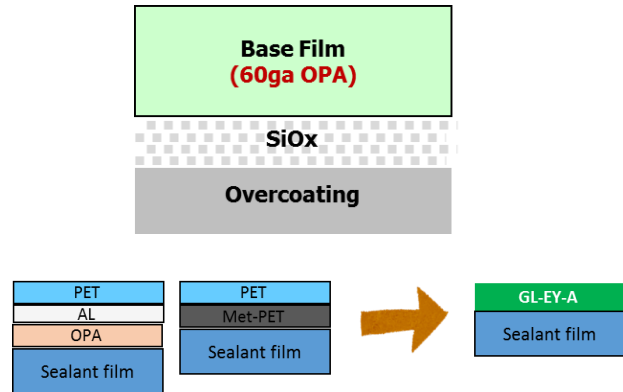


3) GL-EY-A

OPA based transparent vapor deposition film enhances mechanical strength.

Due to its high physical strength, OPA is used in protective packaging and packaging for heavy items in the retail and food service sectors. Barrier performance is provided by adding a barrier layer (aluminum or aluminum deposited onto PET), a printing substrate, and a sealing layer. This results in packaging with a three- or four-layer laminate structure.

GL-EY-A reduces from traditional 3-4 layers to 2 layers with its mechanical strength, high barrier property and printability.



4) Coated Met-PET

Met-PET + TOPPAN Special Coating to enhance barrier and flex resistance.

AL had been the only option for contents requiring light blocking, yet it cause cracking problems during converting/distribution.

Also, traditional Met-PET did not have enough oxygen barrier properties.

Toppan developed Met-PET that has approximately 20 times higher OTR and has improved cracking resistance compared to the traditional Met-PET.

