

## RECORDED BENEFITS

- Recyclable, sustainable replacement for fossil-based polyethylene barrier
- Successful application “on machine” eliminating a converting step and associated costs
- Cost competitive solution allowing paper producer to produce specialty versus commodity products and improve profitability

## Recyclable Barrier Coating Program Replaces Polyethylene for Dry Pet Food Packaging

### TopScreen™ Oil and Grease Resistant Barrier Coatings

#### Customer Challenge

A European producer of coated recycled board required a more sustainable, recyclable barrier solution to replace polyethylene (PE) for dry pet food box applications. The desired solution would eliminate the PE extrusion converting operation and utilize the existing board machine coaters.

#### Process:

- 300-500 g/m<sup>2</sup> for folding carton applications
- 25-30 g/m<sup>2</sup> of PE applied on extrusion line
- Three-ply former
- Metered size press
- Four on-machine coaters; one rod and one blade per side

#### Recommended solution

- TopScreen™ DL100 for higher KIT values
- TopScreen™ DL102 for higher purina test values
- Flexible precoat applied to back side at 7-10 g/m<sup>2</sup>
- TopScreen™ 65 JAB oil and grease resistant barrier topcoat applied to the back side at 10 g/m<sup>2</sup>

#### Results Achieved

- All barrier requirements were met:
  - KIT flat: 14
  - KIT crease: 6
  - MVTR: <100 g/m<sup>2</sup> (24h at 23°C, 50% relative humidity)
  - Purina test: >200 h, 60°C, 60% relative humidity, groundnut oil)
- Cost competitive versus 25 g/m<sup>2</sup> PE
- Recyclable, repulpable, more sustainable water-based barrier system with >50% non-fossil based raw materials
- No issues with “blocking”
- Opacity and whiteness improved versus PE
- Good printability without corona treatment
- Good gluability with both hotmelt and water-based cold set gluing systems

All statements, information and data presented herein are believed to be accurate and reliable, but are not to be taken as a guarantee, an express warranty, or an implied warranty of merchantability or fitness for a particular purpose, or representation, express or implied, for which Solenis and its affiliates and subsidiaries assume legal responsibility. ™Trademark, Solenis or its subsidiaries, registered in various countries. \*Trademark owned by a third party. ©2020 Solenis.