

RECORDED BENEFITS

- Recyclable, more sustainable replacement for fossil-based polyethylene barrier
- Repulpable
- Printable
- Good hot melt gluability
- High sustainable content of the coating
- Competitive versus polyethylene barrier with at 10% premium

Recyclable Barrier Coating Replaces Polyethylene for Ream Wrapping Paper

TopScreen™ Water Repellent Barrier Coating

Customer Challenge

A European producer of office paper and professional printing papers required a more sustainable, recyclable barrier solution to replace polyethylene (PE) for a ream wrapping paper application. The desired solution was to eliminate the PE extrusion converting operation and utilize the existing off-line coaters.

Process:

- 90 g/m² copy paper is used as base paper for coating
- 15-20 µm PE applied on extrusion line to protect the packed paper sheets from the effects of moisture during storage
- Target MVTR of 12 g/m²/24h at 25°C/75% Relative Humidity
- Off-line coater with air knife available

Recommended solution

TopScreen™ DS3V (15 g/m² in one coating layer) was selected to achieve targeted MVTR barrier properties. The product was diluted before application to achieve desired barrier coating application of 15 g/m² for the air knife coater to be used.

Results Achieved

- MVTR of 11 g/m²/24h at 25°C/75% relative humidity was achieved with 15 g/m² coating weight
- Repulpable
- Printable
- Good hot melt glueability
- High sustainable content of the coating (65%)
- 10% higher barrier cost compared to 15-20 µm PE