FiberLean
Strength by Design

Case Study: MFC as a Coating - Wet-end Application

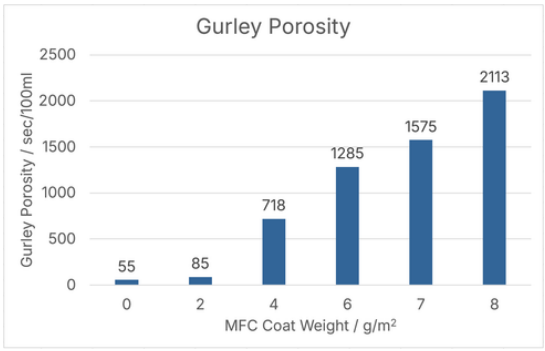
Barrier performance of paper machine trial samples

Trial Background

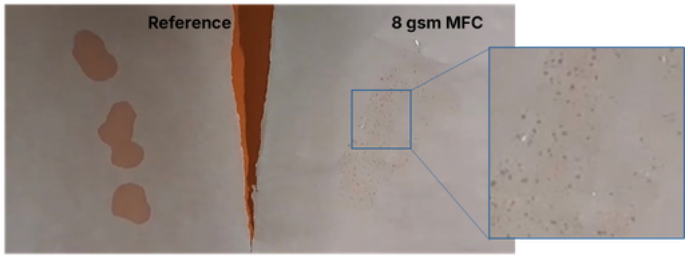
✔ Apply varying levels of MFC to surface of 40 g/m^2 base paper at wet-end of paper machine to evaluate barrier properties.
✔ Machine speed: 420 m/min
✔ MFC produced using FiberLean G250 grinder.
✔ 8 gsm MFC coated paper offline coated with starch coating.

Outcomes

✔ As demonstrated by porosity, significant closure of sheet through application of MFC.
✔ Pinholes were visible in oil draw down tests, so the surface was not yet "completely closed" to a point where full barrier properties could be achieved.
✔ Nonetheless, improved surface of MFC coated papers resulted in significant reduction in barrier coating requirements when tested in laboratory coating evaluations.



✔ Post trial addition of starch coating by customers resulted in PFAS free-mid level grease resistant paper for fast food wrap.



8 g/m² MFC – Droplet test with Oleic Acid.

MFC production equipment recommendation: FiberLean G250

- Grinder footprint: 2.6 x 2.6 m
- Throughput 140 dry kg MFC/h
- Suitable for all chemical and most recycled pulps
- Food contact regulatory clearance

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