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Recycled Content in Paper: Opportunities and Challenges  
NERC Webinar Series
Sonoco Overview

- Global Consumer: 43.4%
- Global Paper/Industrial Converted Products: 36.8%
- Display & Packaging: 10.3%
- Protective Solutions: 9.5%
100 Most Sustainable Companies for 2019

Corporate Responsibility Award

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Sonoco’s Sustainable Packaging Partnerships

Sonoco is constantly reviewing new organizations and opportunities, including holding board or steering committee seats with many organizations.
Currently, Sonoco recycles, or causes to be recycled, the equivalent by weight of 83% of the volume of product it places into the global marketplace; we are committed to 85% by 2025.

Sonoco currently utilizes 96% recycled fiber in its global raw material purchases; 88% post-consumer fiber. Additionally, Sonoco uses 21% total recycled resins; 18% post-consumer.

Our 10 North American recycled paper mills produce 100% recycled paperboard; 85-90% post-consumer.
Some Products from Sonoco’s Recycled Paperboard
Challenges and Opportunities

• Recycled fiber has long been a component of packaging systems and should continue to be utilized in greater amounts.

• External design approaches tend to be too simplified and don’t always align the package with the product being packaged or existing end-of-life opportunities.

• Paper/board packaging is being included in EMF NPE commitments; any board with poly or other constituents that end up as mill residue not considered recyclable.

• Use of recycled fiber in direct food contact – or any fiber in non-dry food applications – requires barriers. Some require special pulping systems in order to extract the fiber and responsibly recover the residue. We see these types of systems expanding with additional recovery aspects emerging.

• However, today, we are experiencing significant bias against barrier packaging, even as proven systems exist today to recover them. Packaging destined for specialized pulping systems are often thought of as less sustainable than that going into more general pulping systems. The outcome – recycled paper – is the same and systems are emerging to recover all components, not just the fiber.

• Bottom line, however, it must first get collected.
Case Study: Recycling Pringles Cans

The plan
Recycle Pringles cans with UBC at Sonoco’s Stainland Mill. Join ACE-UK development to recycle poly-Al and steel ends at third party.

Status:
Pulping of Pringles cans and UBC successful; residue extractable with little fiber present. Curbside trial underway. Trial RTS collection with UBC at Tesco’s also underway.

Next steps
• Validate mechanical sorting results
• Scale-up at curbside and Bring Bank
• Engage with ACE on poly-Al recycler

Illustration of Pulping Process
- Input: cans go into the pulper machine
- Outputs: Metal bottoms as part of the rejects, Paper fibers ready to be used

<table>
<thead>
<tr>
<th>Process</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pulper</td>
</tr>
<tr>
<td>2</td>
<td>HO Cleaner</td>
</tr>
<tr>
<td>3</td>
<td>Rape</td>
</tr>
<tr>
<td>4</td>
<td>Screen 1</td>
</tr>
<tr>
<td>5</td>
<td>Thickener</td>
</tr>
<tr>
<td>6</td>
<td>Machine Crest</td>
</tr>
<tr>
<td>7</td>
<td>Ground</td>
</tr>
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<td>8</td>
<td>Slip</td>
</tr>
</tbody>
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RECYCLE
Adding paperboard cans to the beverage carton recycling stream

- Does not alter the efficiency of sorting beverage cartons.
- Will not increase the amount of pollutants (plastics) in the stream.
- Will not affect the efficiency of the beverage carton recycling process.
- Will increase the amount of paper materials being sent to recyclers.
- Will increase the volume of Poly-Al to develop Poly-Al valorisation processes.
- Will increase volumes and optimise transportation costs.
- Will reduce storage in bunkers as waste can be shipped quicker to mills.
- Will make it more attractive for UK councils to see value in collecting the material.
Emerging agreement that some form of EPR is coming
Alternate recycling becoming a reality for addressing most critical issues while achieving NPE targets
Pyrolysis being tested as solution to mill plastic residue
Phased in process toward true chemical recycling needed to ensure efficiency, applicability based on need and reasonable costing structure

Source: American Chemistry Council Plastics Division citing Closed Loop Partners (2018), Accelerating Circular Supply Chains for Plastics.
Thank You!

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