PLASTICS DESIGN FOR RECYCLABILITY WEBINAR SERIES

Part 6: Using More Postconsumer Recycled Material (PCR)

Hosted by:

Walmart

APR

The Association of Plastic Recyclers
Registration links, presentation slides and recordings will be available on the APR Website and the Walmart Sustainability Hub.
TODAY’S PRESENTERS

Steve Alexander
President, APR

Ashley C. Hall
Sustainable Packaging Lead, Walmart

Curt Cozart
President, Common Sense Solutions, Inc

Kara Pochiro
VP of Communications & Public Affairs, APR

The Association of Plastic Recyclers
AGENDA

1. Reminders:
   a. What Is This Series?
   b. Walmart goals
   c. Who is APR and what makes something recyclable.

2. PCR Quality – expectations and limitations

3. Locating PCR sources

4. Communication

5. Flake verses pellet

6. Implementation

7. Checks and balances

8. Resources

9. Questions
WHAT IS THIS SERIES?

A series of webinars hosted by Walmart, and presented by The Association of Plastic Recyclers, discussing design for plastics recyclability and communicating the common messages within the Walmart Recyclability Playbook and the APR Design® Guide for Plastics Recyclability.

July 11  Overview of Plastics Packaging  
August 1  Why Is/Isn’t My Plastic Recyclable?  
August 29  PET Packaging  
September 12  HDPE and PP Packaging  
October 17  Flexible Packaging (Bags/Wraps/Films)  
October 31  Using More PCR

All webinars begin at 2:30 PM EST.
OUR SUSTAINABILITY PRIORITIES

Key Focus Areas for Walmart Sustainability in FY20

**PROJECT GIGATON**
Working with suppliers to reduce 1 billion metric tons of GHGs by 2030

**PACKAGING & PLASTICS**
Use less plastic.
Make it recyclable.
Label it for the customer.

**SUSTAINABLE PRODUCTS**
Identify sustainability priorities based on your product category

**JOIN US!**
WALMARTSUSTAINABILITYHUB.COM

**USE SUSTAINABLE MATERIAL SPECS AND LABEL PACKAGING**

**ADVANCING EDLTC ACROSS ALL PRODUCT CATEGORIES**
OUR SUSTAINABLE PACKAGING COMMITMENTS
For Private Brands, Encouraged for National Brands

USE LESS PLASTIC
Reduce the use of plastic when possible

MAKE IT RECYCLABLE
20% Recycled content in plastic packaging
100% Recyclable, reusable, or industrially compostable

LABEL IT
100% Packaging labeled for recyclability

Remove unnecessary packaging
Increased recycled content
Make packaging recyclable
Apply the How2Recycle label

INNOVATE TOGETHER
Project Gigaton is designed so that every supplier can participate in at least one pillar.
The Sustainability Hub, a one-stop shop

- Learn how to design for recyclability
- Download the recycling playbook
- Find webinar recordings
- Link to other resources

walmartsustainabilityhub.com
WHO IS APR?

International trade association

The Voice of Plastics Recycling®

Companies committed to the success of plastics recycling
WHO IS APR? ENSURING PACKAGE DESIGN FITS WITH RECYCLING INFRASTRUCTURE

- APR Design® Guide for Plastics Recyclability
- Test Methods
- Training
- Communication
- Advocacy
APR’s DEFINITION OF RECYCLABLE

60% consumer access

Processed by existing infrastructure
- sort
- clean

Can be manufactured into identifiable product
MISNOMER:

High quality end products cannot be made from recycled plastics. Recycling is really ”down cycling”
PCR QUALITY
Expectations and Limitations

PCR is available that is:

- Allowed by the FDA for direct food contact (PET, HDPE and PP)
- Capable of being made into very high quality products even at 100% (clear bottles, microfiber, blown film etc)

PCR generally:

- Has wider properties than virgin
- May differ between suppliers
- May differ from virgin
LOCATING PCR SOURCES
www.Plasticsrecycling.org
LOCATING **FDA** PCR SOURCES

www.Plasticsrecycling.org
### Submissions on Post-Consumer Recycled (PCR) Plastics for Food-Contact Articles

This is a list of submissions for which FDA issued a favorable opinion on the suitability of a specific process for manufacturing of food-contact articles. The list includes the date of our no objection letter (NOL), the company responsible for the process, and the conditions of use for the recycled plastic. Additional information can be found on [FDA.gov](http://www.FDA.gov).

#### Search and display hints:
- Select the Recycle Number below to view the record details, including its polymer recycling process and the company responsible.
- The search results will return hits of records containing words that include the search term. For example, searching for "recycling" will return records containing "recycling" or "recyclable".

<table>
<thead>
<tr>
<th>Recycle Number (sort by: A-Z)</th>
<th>Date of NOL</th>
<th>Company</th>
<th>Polymer</th>
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<tbody>
<tr>
<td>218</td>
<td>Jul 31, 2018</td>
<td>Wiley &amp; Rein on behalf of Envision Plastics Inc.</td>
<td>HDPE</td>
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<tr>
<td>219</td>
<td>Jun 13, 2019</td>
<td>Keller &amp; Heckman on behalf of Global Holdings and Development LLC</td>
<td>PET</td>
</tr>
<tr>
<td>217</td>
<td>May 29, 2019</td>
<td>Wiley &amp; Rein on behalf of Plastic Recycling Inc</td>
<td>PP</td>
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<tr>
<td>216</td>
<td>May 21, 2019</td>
<td>Keller &amp; Heckman on behalf of Paper-Mellor KG</td>
<td>LDPE</td>
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<td>215</td>
<td>Oct 18, 2018</td>
<td>Interlink Health, Environmental &amp; Regulatory Services on behalf of Aaron Industries Corporation</td>
<td>PP and HDPE</td>
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<td>214</td>
<td>Aug 24, 2018</td>
<td>Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Veolia Entsorgungs- und Verwertungs GmbH</td>
<td>PBT</td>
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<tr>
<td>213</td>
<td>Aug 13, 2018</td>
<td>Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Polymat AG</td>
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<td>212</td>
<td>Aug 9, 2018</td>
<td>Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Keyesborg Plant Technology GmbH &amp; Co. KG</td>
<td>PET</td>
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<td>211</td>
<td>Jul 27, 2018</td>
<td>Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Reispol Combos de Residuos e Productos Plasticos, Ltda</td>
<td>PET</td>
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<tr>
<td>210</td>
<td>Jul 27, 2018</td>
<td>Keller &amp; Heckman on behalf of Navida Plastics Technologies Inc.</td>
<td>PET</td>
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<tr>
<td>209</td>
<td>Mar 22, 2018</td>
<td>Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Retenhausen Carton Sheet Coating GmbH &amp; Co. KG</td>
<td>PET</td>
</tr>
<tr>
<td>208</td>
<td>Mar 22, 2018</td>
<td>Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Total Research and Technology Felay</td>
<td>HDPE</td>
</tr>
<tr>
<td>207</td>
<td>Feb 8, 2018</td>
<td>Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Keyesborg Plant Technology GmbH &amp; Co. KG</td>
<td>PET</td>
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<tr>
<td>206</td>
<td>Nov 29, 2017</td>
<td>Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Battenfeld Cincinnati Germany GmbH</td>
<td>PET</td>
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<tr>
<td>205</td>
<td>Oct 17, 2017</td>
<td>Wiley Rein LLP on behalf of KPI Plastics</td>
<td>HDPE</td>
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<td>204</td>
<td>Sep 6, 2017</td>
<td>Keller &amp; Heckman on behalf of CORESA Compania Revisiadores S.A</td>
<td>PET</td>
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<td>203</td>
<td>Jul 10, 2017</td>
<td>Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Ludwig Bandera S.p.A.</td>
<td>PET</td>
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<td>202</td>
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<td>Keller &amp; Heckman on behalf of Envision Plastics</td>
<td>PET</td>
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<tr>
<td>201</td>
<td>Jun 23, 2017</td>
<td>Keller &amp; Heckman on behalf of refratek Holdings, Inc.</td>
<td>PET</td>
</tr>
<tr>
<td>200</td>
<td>Jun 1, 2017</td>
<td>Keller &amp; Heckman on behalf of Envision Plastics</td>
<td>HDPE</td>
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COMMUNICATION:
The key to a good relationship

Production team  Sales  Purchasing  Production team

Plastics Recycler  Customer
INITIAL COMMUNICATION:
Create and compare spec sheets
Questions to Ask the Reclaimer:

- FDA – Food Contact
- Viscosity
- Shipping Method
- Consistency
- Bulk Density
- Color
- Metal ppm
- Dimensions

** ASSIGN A PROJECT MANAGER TO ADDRESS THESE QUESTIONS **
CONSIDERATIONS

Flake or Pellet

**Flake**
- Is cheaper
- Conveys and stores differently than virgin
- Contains more fine solid particles
- Is not melt blended

**Pellet**
- Is more like virgin
- HDPE and film is not available in flake
- Is melt blended (less variable)
CONSIDERATIONS

Blending

PCR is wider spec. Blending is key

- Evaluate the recyclers blending capabilities
  - Alternating material bales
  - Blending silos
  - Extruders

- Determine if additional blending is required at the purchaser and install if necessary
IMPLEMENTATION

- START SMALL
- WORK GRADUALLY INTO LARGER BATCHES
- PROVIDE FEEDBACK TO THE RECYCLER AFTER EVERY STEP - Who can address the issue: the recycler or the purchaser?
- INVOLVE YOUR PRODUCTION AND ENGINEERING TEAMS – Have them communicate with the recycler
- COMPARE OTHER RECYCLERS
- USE CONSULTANTS WHO SPECIALIZE IN PCR IMPLEMENTATION
- EVALUATE RISK : HOW MANY RECYCLERS SHOULD BE QUALIFIED?
Become an APR Recycling DEMAND CHAMPION
Participating in this critical program is simple.

STEP 1  →  SIGN COMMITMENT LETTER
APR Recycling Demand Champion Pledge – I will be an APR Recycling Demand Champion!

“I commit to participate in the APR Recycling Demand Champion Program to drive PCR use of broad specification PCR. I will provide an initial list of future actions to the APR within 60 days and timely report progress so positive impacts may be anonymously aggregated and collectively reported. I believe demand creates value and value drives recycling.”

See the full commitment letter on our website.

STEP 2  →  OPTION A – CHOOSE PCR CONTAINING ITEM(S) TO PURCHASE
Everyday use/catalog order items are easily available and actively being used. Examples include:
• trash bags
• mop buckets
• trash cans
• totes
• recycle bins
• safety signs

Also, many companies are purchasing WIP (work-in-process) items:
• pallets
• collapsible pallets
• crates
• totes
• large liquid containers

visit our website to see vendors for work in process (WIP) items containing PCR

OPTION B – EXPAND YOUR CURRENT USE OF PCR
Increase the amount of PCR in a current product or application, or develop a new product or application for PCR.
2019 APR Recycling Demand Champions

25.9 million pounds of postconsumer resins

Increased their PCR use by

PCR uses include:
- pallets
- gaylord liners
- labels
- packaging
- can liners
- trash & recycling bins
- film products

Resulting in these estimated impacts:

- Greenhouse gas emissions from 6,369 passenger vehicles driven for 1 year

- Job creation in plastic recycling for 337 people

- All the plastic recyclables from a city the size of Minneapolis, Minnesota (422,331 population)

The APR Recycling Demand Champions - strengthening and increasing domestic demand for recyclable plastics

Data sources:
* EPA WARM Model
** Private consultant/industry experts
*** The Recycling Partnership
Project Gigaton is designed so that every supplier can participate in at least one pillar.
How the recycling chain works, from first use to reuse.
DESIGNING FOR RECYCLABILITY

- Leverage the Walmart Recycling Playbook and APR Design Guide for Plastics Recyclability
- Use the How2Recycle label for consumer messaging
QUESTIONS

Kara@PlasticsRecycling.org
Steve@PlasticsRecycling.org
ccozart@c-sense-solutions.com*APR Design® Guide Training Program

The Association of Plastic Recyclers