

# Ethicon Packaging Sustainability

2023 MGMC  
Mini-Conference

**ETHICON**

Johnson & Johnson SURGICAL TECHNOLOGIES



# Packaging Sustainability Team



Sustainability Sponsor



Sustainability Champion



Sustainability Core Team



Site Leads



Project Leaders

# Sampling of Global Customers Prioritizing Sustainability



# Packaging Sustainability Trends from Tenders

Examples of new Sustainability Criteria for Healthcare Packaging:



1. Recyclability of the packaging
2. Primary packaging contains at least 10% post-consumer recycled content
3. Secondary packaging contains at least 30% post-consumer recycled content
4. Forest Stewardship Council (FSC) Certification from 100% well managed forests, from responsible sources
5. Using consumer friendly recycling labels that meet US Federal Trade Commission Green Guides
6. Fostering end-of-life product take back programs



# Regulatory Trends that drive Sustainability

- Incoming Regulations
  - Packaging and Packaging Waste Regulation (EU PPWR)
    - Potential requirements around recycled content
    - Design for recyclability
    - Material optimization
  - European Union Deforestation Regulation (EUDR)
    - Due diligence – country of origin, certification status
    - Import/Export Requirements



# Healthcare Plastics Recycling Council Guidance



**Rigid Thermoformed Blisters and Trays**

HPRC is a voluntary, technical consortium of industry peers across the healthcare, recycling, and waste management industries seeking to improve the recyclability of plastic products and packaging within healthcare.

| Category                                       | Preferred  | Less Preferred                | Not Preferred  |
|--|--|-------------------------------|--|
| Material                                       | APET (qualified for medical applications)<br>HDPE<br>PP                | PETG                          | Other materials (e.g., PVC, PS, TPU, mixed materials)<br><br>Heat seal coatings, direct seal sealants, or coextruded sealing layer |
| Color  | Lightly tinted translucent/transparent blue (PET)<br>Natural (no tint) | White<br>Light opaque colors  | Dark opaque colors<br>Metallic colors  |
| Tray information (e.g., lot codes, exp. dates) | Embossing<br>Direct print  | Label substrate<br>Polyolefin | Label substrate<br>Paper labels<br>Other plastics  |

| Porous Lidding      |                          | Less Preferred  | Not Preferred   |
|---------------------|--------------------------|-----------------|-----------------|
| Category            | Preferred                | Less Preferred  | Not Preferred   |
| Material            | Polyolefin (e.g., Tyvek) | Paper           | Other materials |
| Color               | Natural or white         |                 | All other       |
| Lidding information | Direct print             | Label substrate | Other materials |

# **Sustainability Packaging Design Guidance**

# Example Guidance for Sustainable Packaging Design

Rigid Thermoforms

Breathable Pouches

Non-Breathable Pouches

Flexible Form/Fill/Seal (F/F/S)

Star Tubes

Additional packaging

## Rigid Thermoforms

### Tyvek

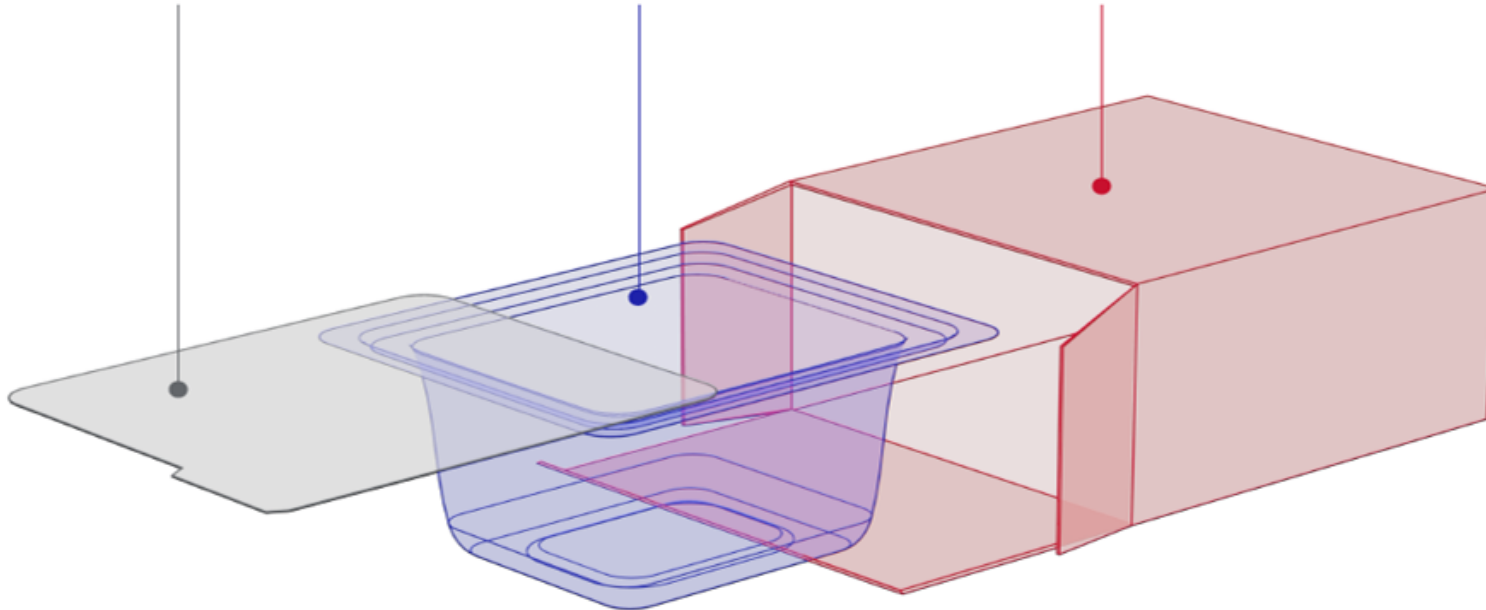
Use HDPE with coating with a mass balance offset

### Blister

Use aPET or PCR/mass balance (clear or lightly blue tinted)

### Carton

Uses highest PCR content, if not 100% PCR, then rest of material should be from certified paper content



### Additional packaging considerations

#### Shipper

Uses highest PCR content, if not 100% PCR, then rest of material should be from certified paper content

**Carton Hold down/fitment or Foam end caps**  
Do not use, but if you do need one for design reasons, refer to the carton item above.  
Do NOT use foam

#### IFU

Uses highest PCR content, if not 100% PCR, then rest of material should be from certified paper content

#### Label

Depends on what it is attached to

- If attached to paper, then use highest PCR content, if not 100% PCR, then rest of the material should be a of certified paper content
- If attached to plastic, then use 100% PE or PP

#### Shrink Wrap

Do not use, if needed, then use 100% PE or PP



**Recycled Board**

# Incorporating Post-Consumer Recycled Content in Cartons

## Project Overview

**Goal:** Evaluate PCR carton board for equivalency with current virgin carton used in production

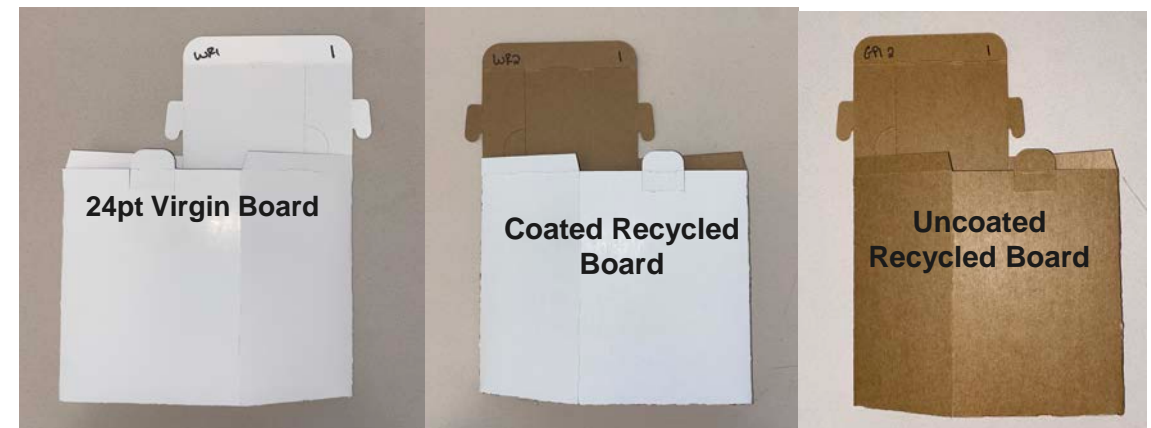
**Why:** Simplify transition to using paperboard containing PCR for cartons within your OpCo

**How:** Develop & execute a protocol to test for equivalency between carton materials through compression testing

## Virgin Carton



## Cartons with PCR

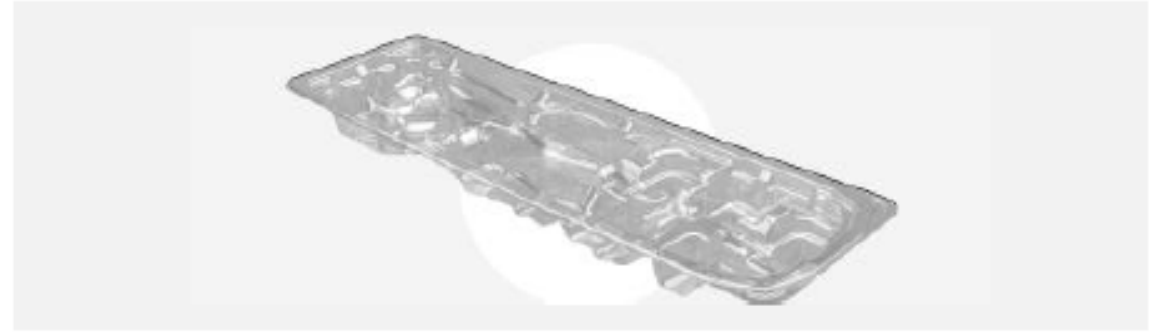




**Plastic**

# RENEW Case Study

- At J&J, we aim to work with suppliers attempting to find solutions to help divert waste from landfills and to develop technologies that turn diverted waste into new materials.
- In 2022, Ethicon entered into an agreement with Eastman to purchase Eastman's Eastar™ Renew 6763 copolyester for its medical device trays. Eastman is a global specialty materials company that produces a broad range of advanced materials, chemicals and fibers found in items people use every day.
- With each tray, Ethicon helps to divert waste from landfills and supports new recycling technologies that transforms hard-to-recycle materials into new plastics.
- We know that a collective approach is essential to tackle today's greatest environmental challenges. This is an important first step toward advancing the circularity of our healthcare packaging.



# Examples of Plastic Reduction

- Currently we have 10 active projects to achieve 30% plastic reduction
- Case Study of one project
  - PETG to aPET (plastics identifier code from 7 to 1)
  - Used modeling and simulation tool to optimize package size and reduce thickness of tray
  - Consolidated 5 unique trays to 2 designs
  - Eliminated protective foam with design enhancements to tray
  - Cost savings



# Eliminate Materials with Concern

- PVC releases chloride-based chemicals that build up in our water, air and food chains
- Tenders are negatively affected if we answer yes to PVC
- Qualification work involves collaborating with suppliers to generate biocompatibility data and quickly prototype samples to perform feasibility testing

Ethicon products in process of eliminating PVC



**Thank You**