

PAC Sustainable Packaging Student Design Competition 2011-2012



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The Challenge!

PAC - The Packaging Association, Walmart Canada and Procter & Gamble are challenging students to create a sustainable package design for Duracell C4 batteries.





Background:

PAC - The Packaging Association

The Competition

PAC - The Packaging Association has been challenging students for years with their biennial Packaging Design competition. In keeping with the Global movement toward sustainability we have added the Sustainable Packaging Design category. We are fortunate to have two of Canada's most prestigious organizations as sponsors of the event, Walmart Canada and Procter & Gamble.

Overview

PAC - The Packaging Association is more commonly referred to as PAC. Founded in 1950 PAC is a not-for-profit corporation and a package-neutral association with over 1700 members.

In 2008 a new Student Chapter was founded to facilitate relations between the leaders of tomorrow, academic institutions and industry. PAC is the common link that binds the packaging community together. Our members can be found throughout the packaging supply chain from retailer through to academic facilities and students. We all have one thing in common: packaging.

Vision

To provide leadership for the packaging industry across North America and increase our profile within the global market.

Mission Statement

To maximize value and sustainable growth for our association and our members.



Background:

Walmart Sustainable Packaging Global Initiative

Walmart Stores has challenged its 60,000 worldwide suppliers on their ability to develop packaging and conserve natural resources. This initiative is projected to reduce overall packaging by five percent.

In addition to preventing millions of pounds of trash from reaching landfills, the initiative is projected to save 667,000 metric tons of carbon dioxide from entering the atmosphere. This is equal to taking 213,000 trucks off the road annually, and saving 323,800 tons of coal and 66.7 million gallons of diesel fuel from being burned.

“Packaging is where consumers and suppliers come together and can have a real impact both on business efficiency and environmental stewardship,” said former Walmart CEO H. Lee Scott. “Even small changes to packaging have a significant ripple effect. Improved packaging means less waste, fewer materials used, and savings on transportation, manufacturing, shipping and storage.”

Walmart’s packaging vision began to form when the company partnered with suppliers to improve packaging on its private label Kid Connection toy line last year. By reducing the packaging on fewer than 300 toys, Walmart saved 3,425 tons of corrugated materials, 1,358 barrels of oil, 5,190 trees, 727 shipping containers and \$3.5 million in transportation costs, in just one year. Now Walmart is taking what it learned from Kid Connection and applying it to the more than 160,000 products.

Background:

Walmart's Core Sustainability Goals



To be supplied 100%
by renewable energy



To create zero waste



To sell products that sustain
people and the environment





Background:

About Procter & Gamble

Four billion times a day, P&G brands touch the lives of people around the world. The company has one of the strongest portfolios of trusted, quality, leadership brands in the world. The P&G community includes approximately 127,000 employees working in about 80 countries worldwide.

We have a strong heritage, founded over 170 years ago in Cincinnati. Our guiding purpose is to provide branded products and services of superior quality and value that improve the lives of Canadians and world consumers, now and for generations to come. Consumers are our first priority and are at the heart of all we do.

P&G Canada

P&G is a leading consumer products company in Canada. Our North American region makes up 42% of P&G's total annual sales in fiscal 2010 of \$78.9 billion. We have been in Canada since 1915 and employ approximately 2,800 people. We currently have two manufacturing facilities in Belleville and Brockville, Ontario which supply the North American market. A Canadian distribution centre is located in Brantford and the head office in Toronto with sales capabilities across Canada.



Background:

Sustainability and Social Responsibility

Sustainability and social responsibility are embedded in P&G's culture. We focus on improvements that matter for the environment and social causes, now and for generations to come – from product innovations such as compacted laundry detergents and cold water washing (saving energy, water, packaging, and transportation) and end-to-end operational improvements to our corporate cause, a program called P&G Live, Learn & Thrive™. The program, which aims to help children in need, is brought to life in Canada through community programs, employee volunteers, and donations that touch the lives of under served children.

Recently, P&G announced a new long-term environmental sustainability vision. We developed this vision over the course of a year, partnering with external experts and soliciting input from hundreds of P&G employees at all levels and functions. As part of P&G's strategy to grow responsibly, we will work towards a long term environmental sustainability vision that includes:

- Powering our plants with 100% renewable energy
- Using 100% renewable or recycled materials for all products and packaging
- Having ZERO consumer and manufacturing waste go to landfills
- Designing products that delight consumers while maximizing the conservation of resources

Background:

What is Sustainable Packaging?

PAC has adopted the sustainable packaging definition developed by the Sustainable Packaging Coalition (SPC), Charlottesville, VA, USA. It has become the de facto standard in North America by many leaders in the packaging community and is being considered as the definition by the Canadian Council of the Ministers of the Environment (CCME).

This a blend of broad sustainability objectives with business considerations and strategies that address the environmental concerns related to the life cycle of packaging. These criteria relate to the activities of the packaging community at large and define the areas in which SPC encourages transformation, innovation and optimization. SPC believes that by successfully addressing these criteria, packaging can be transformed into a cradle to cradle flow of packaging materials in a system that is economically robust and provides benefit throughout the life cycle—a sustainable packaging system.



Background:

Sustainable Packaging Definition Criteria

The product:

- Is beneficial, safe & healthy for individuals and communities throughout its life cycle
- Meets market criteria for performance and cost
- Is sourced, manufactured, transported, and recycled using renewable energy
- Optimizes the use of renewable or recycled source materials
- Is manufactured using clean production technologies and best practices
- Is made from materials healthy in all probable end of life scenarios
- Is physically designed to optimize materials and energy
- Is effectively recovered and utilized in biological and/or industrial closed loop cycles

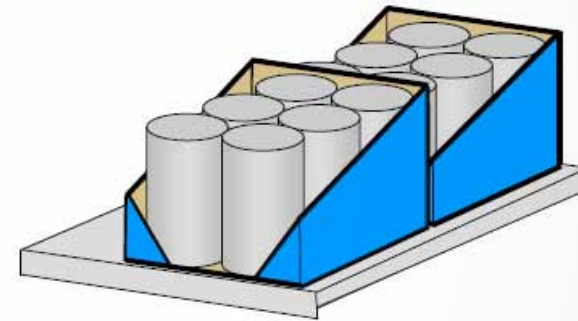
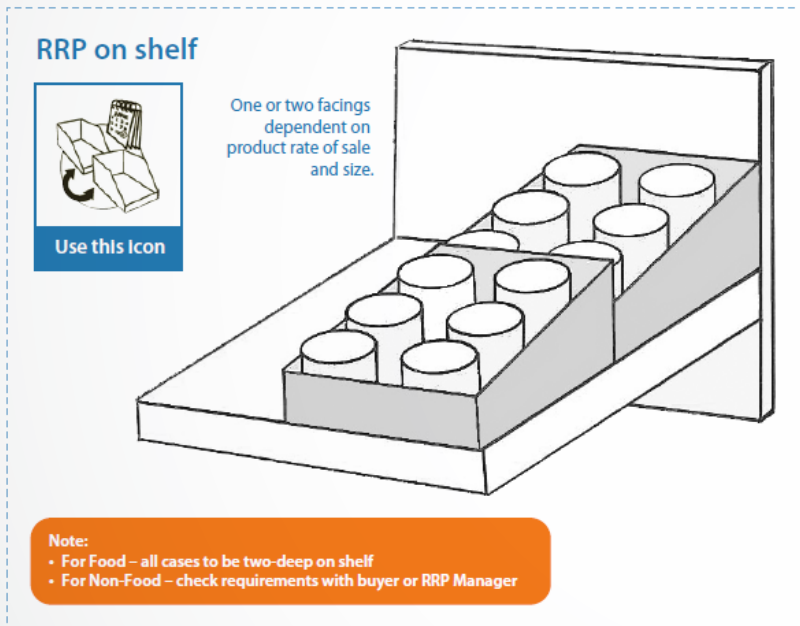
For an explanation of the criteria go to:

<http://sustainablepackaging.org/uploads/Documents/Definition%20of%20Sustainable%20Packaging.pdf>



Background:

Case Dimensions – Product & Shelf Fit



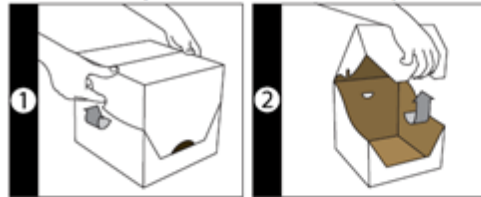
2 cases deep



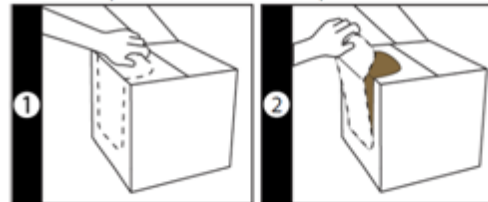
Background: Easy to open Case Symbols

Print these icons when they apply to the case style being used

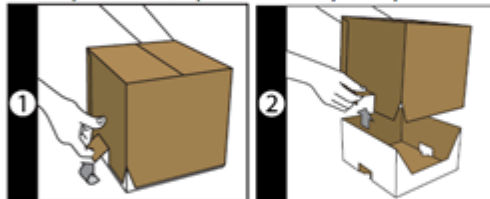
Die Cut RSC - Regular Slotted Carton/Case: Perforated Front Lip and Panels
Boîte à rabats à perforation: Rebord avant et panneaux perforés



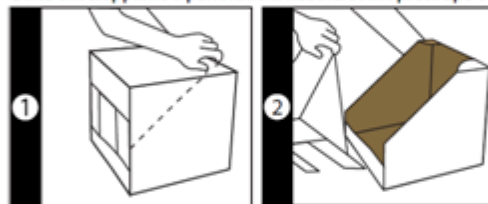
Die Cut Bliss Box/Case: Perforated Front Lip
Boîte Bliss à perforation: Rebord avant perforé



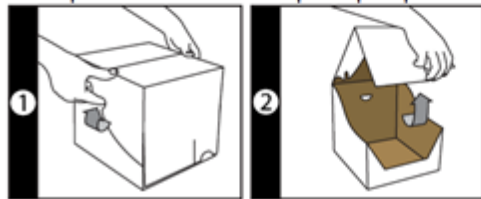
Die Cut 2-Piece Case: Pre-Cut Tray and HSC - Half Slotted Carton/Cover
Boîte à perforation, 2 pièces: Plateau pré-coupé - demi-boîte de carton à rabats



Die Cut Wrap Around Case: Pre-Cut Front Lip and Perforated Panels
Boîte enveloppante à perforation: Rebord avant pré-coupé et panneaux perforés



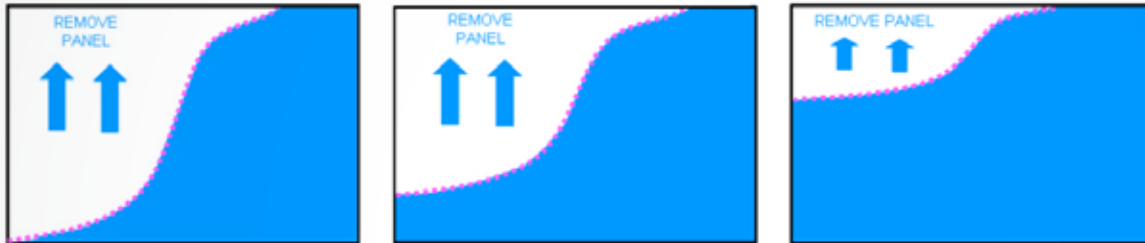
Die Cut Case: Pre-Cut Front Lip and Perforated Panels
Boîte à perforation: Rebord avant pré-coupé et panneaux perforés



Tray & Shrink
Plateau et emballage sous film plastique



Background: RRP Side Wall Profile

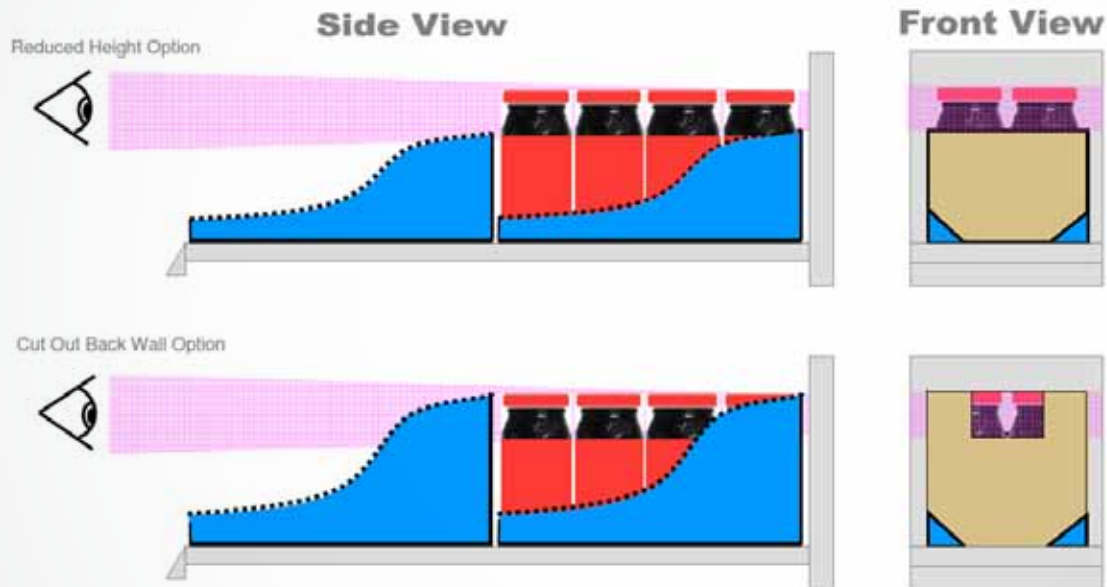


Side walls need to be shaped similar to the above to improve product visibility from the side – consult your corrugate supplier for the strongest slope shape

If cases are merchandised two deep on shelf please refer to the following page for further guidance



Background: Customer Visibility



If one case is being merchandised in front of the other, the rear case needs to be viewed through the empty front case. See above principles.



Background:

For the industry position on RRP together with:

Functional Guidelines

RRP Assessment Tool

Go to <http://www.igd.com/>



Design Objective

The existing Duracell Battery packages need to meet or exceed Walmart and Procter & Gamble's sustainability goals. The objective is to redesign the existing package and shipping case to improve its overall sustainability based on Walmart and Procter & Gamble's goals. The judging criteria is detailed herein.

Expectations



- We are expecting “revolutionary thinking” sustainable packaging submissions.
- All packaging components are open to alternative concepts.
- In addition to the judging criteria, the only requirement is that the primary package must be able to contain four C4 batteries.

Existing Duracell C4 Package Issue:

Current pack design and weight are not conducive to changing a very forgiving base material (PVC) to a more recyclable plastic (example: PETG)

Pack Style: Radio Frequency (RF) sealed blister

Material: .012 PVC

Dimensions:

C4 - 3.875 x 4.5 x 1.090

Weight: C4 - .6lbs



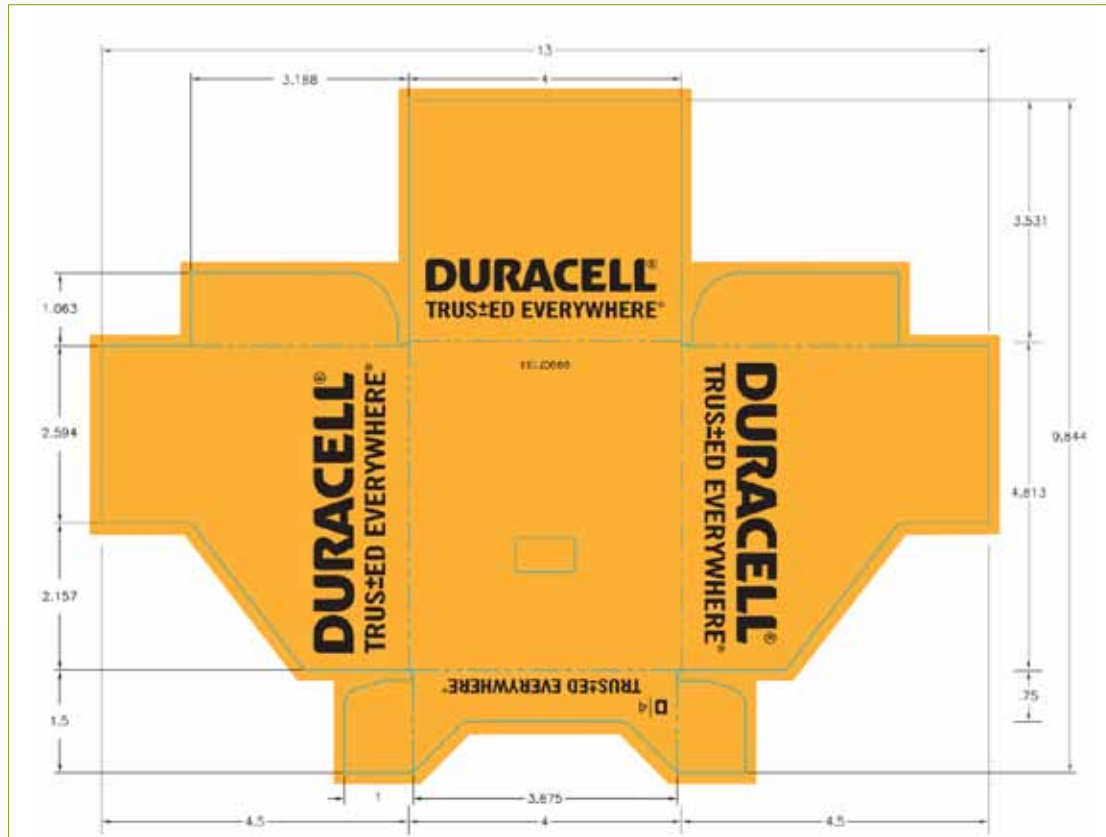
Duracell C4 Package Requirements

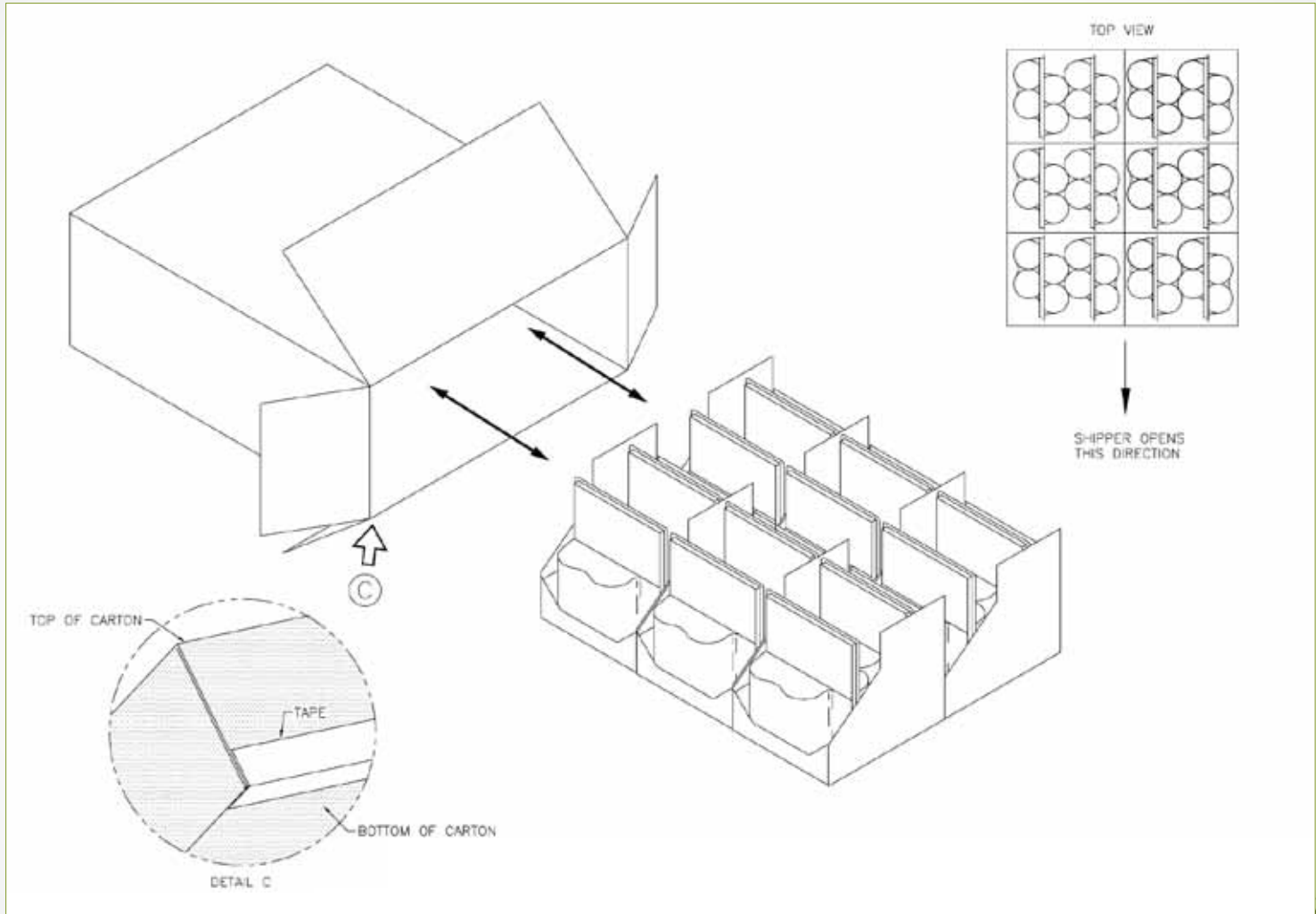
Width and height dimensions must remain the same or harmonize to C4 dimensions

Pack must be able to sustain a one meter drop on the bottom, front face or back without experiencing critical failure

- destruction that would result in a non-saleable pack – extensive breakage/cracking/disfigurement
- cell ejection from the pack on impact or as the pack is retrieved

Pack should have sufficient copy area to portray branding and claims on front of pack along with critical information, caution/guarantee on back as well as bar code





Deliverables

No more than five entries per institution.

1. 3D mock up of package
2. 3D mock up of retail-ready package complete with twelve containers
3. Five copies of the design rationale supporting each entry, maximum 500 words
4. Completed entry form
5. One copy of your course/program overview

How will you be judged?

Refer to the scoring criteria and use the broad definition of sustainability by SPC to address the environmental concerns related to the life cycle of packaging.

- 10%: **1.** Is beneficial, safe & healthy for individuals and communities throughout its life cycle.
- 10%: **2.** Innovation – Meets market criteria for performance and cost
- 50%: {
- Maximizes the retail-ready design to boost in-store labour efficiency
 - Maximizes the retail-ready design to boost in-store sales
 - Maximizes on shelf visibility - primary & secondary packages work together
 - Minimizes the retail-ready material content
 - Minimizes the cost of the package
 - Maximizes product protection
- 10%: **3.** Maximizes the use of renewable or recycled materials
- 10%: **4.** Physically designed to optimize materials and energy
- 10%: • Maximizes Product / Package Ratio
- 10%: • Maximizes Cube Utilization
- 10%: **5.** Package can be effectively recovered and utilized in closed loop cradle to cradle cycles.
- 100%**

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