



Make quality everything
Apex[®]
Quality Polymer Solutions

PolyAl

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**Previously trading as Perspex SA*



**Creating sustainable partnerships in turning
your plastic waste into a usable product**

Case Study

Apex was approached by a Multinational retail and design company to develop a **fully recyclable material** fit for promotional display.



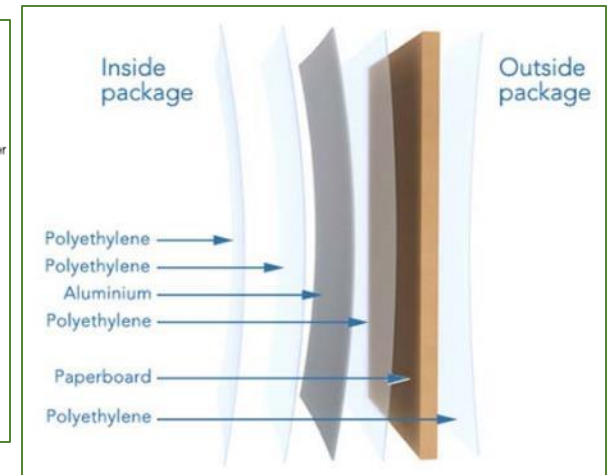
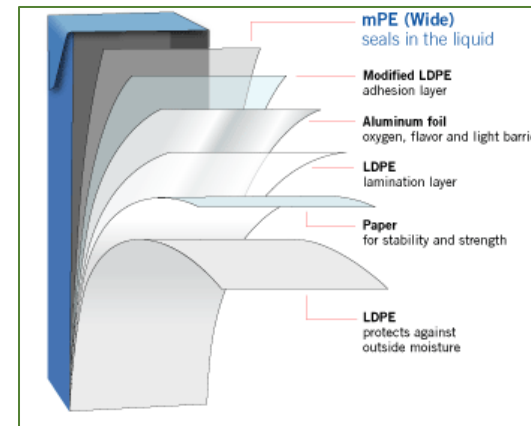
The Multinational had engaged with a Global packaging company that was looking for an **improved recycling solution** for their cartons.

Composition of the Cartons:

- 6% bioplastic cap – **biodegradable**
 - 75% cardboard – **recycled into paper products**
 - 14% plastic
 - 5% aluminium
- } Bound together, called “Polyaluminium” and cannot be separated



Downcycled into single-use items that are ultimately **destined for the landfill** like car floor mats, plastic pens, and flooring/decks



Case Study - Why Apex?

- Apex South Africa has always had a different outlook to customer problems.
- We pride ourselves on being solutions driven.
- We were approached by a customer to assist with the converting of waste destined for landfill, into a reusable product for point-of-sale applications, thus creating a cradle-to-cradle solution.
- Various recycling avenues had been explored previously with the PolyAl material, but no solution had been found for large volumes of the material.
- Smaller injection molding products were successfully done, but nothing to the volume any where in the world that they needed.



Polyaluminum - Challenge Accepted!

The Brief:

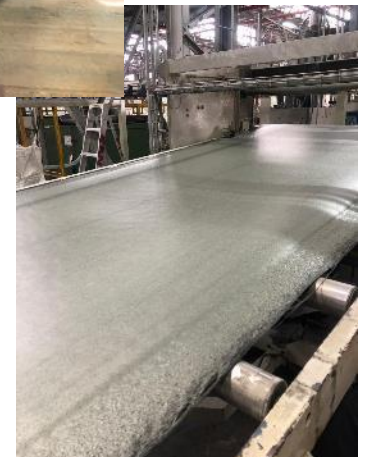
- To work only with the packaging waste
- To produce flat sheets that could be formed into a useful sheet for point-of-sale fabrication.
- Able to print on
- Aesthetically pleasing

Challenges faced:

- Many months of trials (different settings, multiple lines, different finishes)
- Bad odour during extrusion
- Lost cause, despondent staff



Trial & Error



PolyAI - First company globally to succeed!

The start of PolyAI
(Exclusive arrangement with this specific point of sale customer for a period).



18 months down the line...



PolyAI - In Stores Now

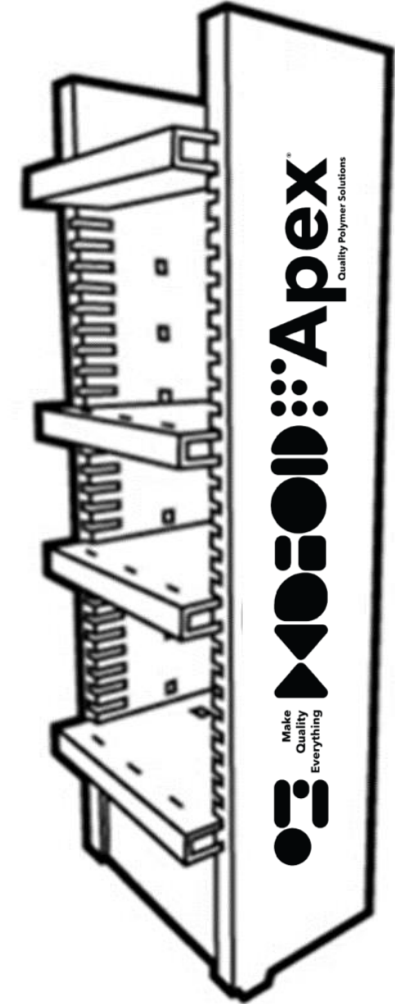
The future of retail point of sale displays

- 100% recyclable
- Flat packed, easy to assemble and modular
- Reusable core structure (up to 24 x) with adjustable shelving
- Covered with a branded sleeve using paper from the recycled carton
- Results in a temporary branded display unit with a core structure to be re-used for future promotional displays
- Up to 20% more cost effective
 - Uses up to 90% less corrugated board
 - No compromise on look & feel
 - 40% carbon footprint reduction



PolyAI

- A 100% recyclable, green, sustainable product
- Can be returned and reprocessed into reusable sheets
- Vac formable
- Printable directly onto substrate or by using a sleeve
- Easy to work with - cut, routered & fabricated
- In its raw sheet form - the product looks 'earthy' and talks to a **great sustainability story**



Summary



How many cartons go into one sheet?



...it takes **4 049** post-consumer 1L long-life liquid cartons to produce **ONE** sheet of PolyAl?

That's 4 049 fewer containers
destined for landfills!



How can you benefit from this success?

PolyAl can be used in applications other than point of sale - with endless possibilities...



...and has a **GREAT STORY TO TELL!**

What do you want your story to say?

Low-Cost Housing



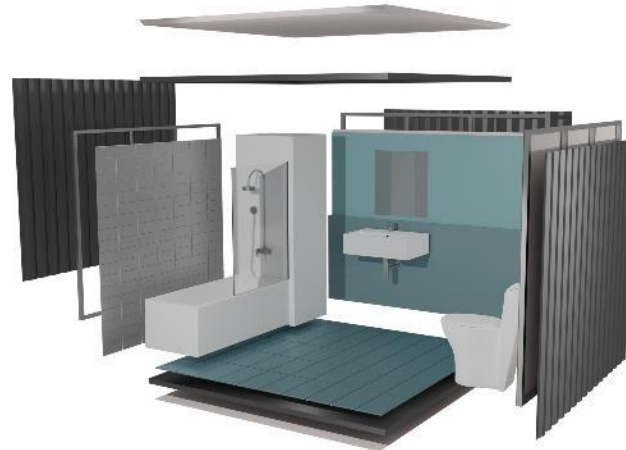
Ceiling Boards



Portable Toilets



Solution for Modular Building



School Furniture



How we help you with a story of your own?

- By fully understanding your current plastic waste management process:
 - Who are your current recyclers?
 - What plastic waste do you have that is currently non-recyclable (part of or fully)?
 - Could be from packaging, manufacturing waste, or material offcuts/waste
 - What sustainability initiatives do you currently have and what would you like to achieve in the future?
 - Can you suggest possible partnerships within your waste stream that Perspex SA can work with to develop usable sheets for reuse & resale
 - Apex could also look at possible engagements to assist you with your sustainability initiatives





Turning your plastic material **WASTE**
into usable **RESOURCES...**