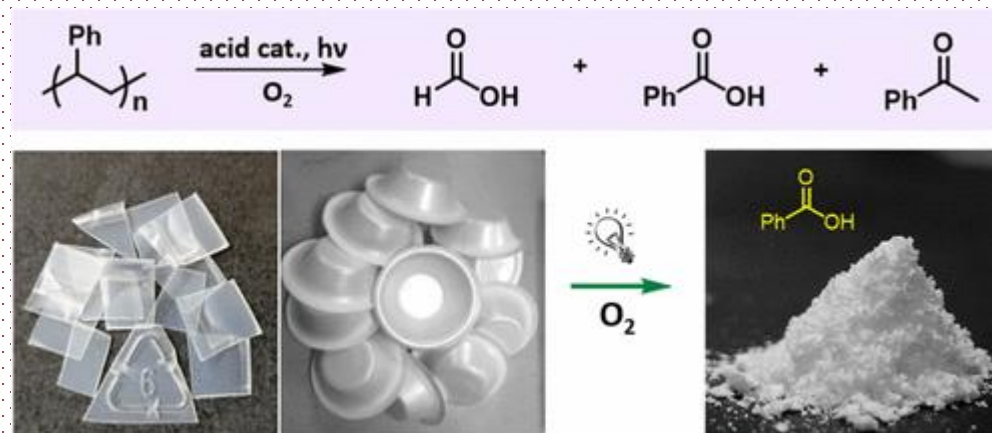




Flux Cup

ANAND PATEL, EVAN MULLINS, ANDRES
RODRIGUEZ

Problems with SOLO Design



Example Recycling Process

"...Remarkably inert and difficult to degrade without special treatment." - *Journal of American Chemical Society*, Zhiliang Huang et al.

Problems with SOLO Design (cont.)

Open top = spills!



Desired Properties/Design Goals

1. Constraining Properties

Tensile strength

Good barrier properties (so it holds liquid)

Nontoxic material

Chemically inert

2. Desired Properties

Easily processed/manufactured (reduces cost)

Recyclable

Keeps drinks cold

Aesthetically appealing



Material Selection

Material Considerations:

PET

- Recyclable
- Easy/cheap processing (thermoforming or injection molding)
- Non-toxic
- Eliminates need for polyethylene coating

Considered composite materials, but each had their drawbacks



Our Design

Spout

- Easy drinking

Tapered Cup

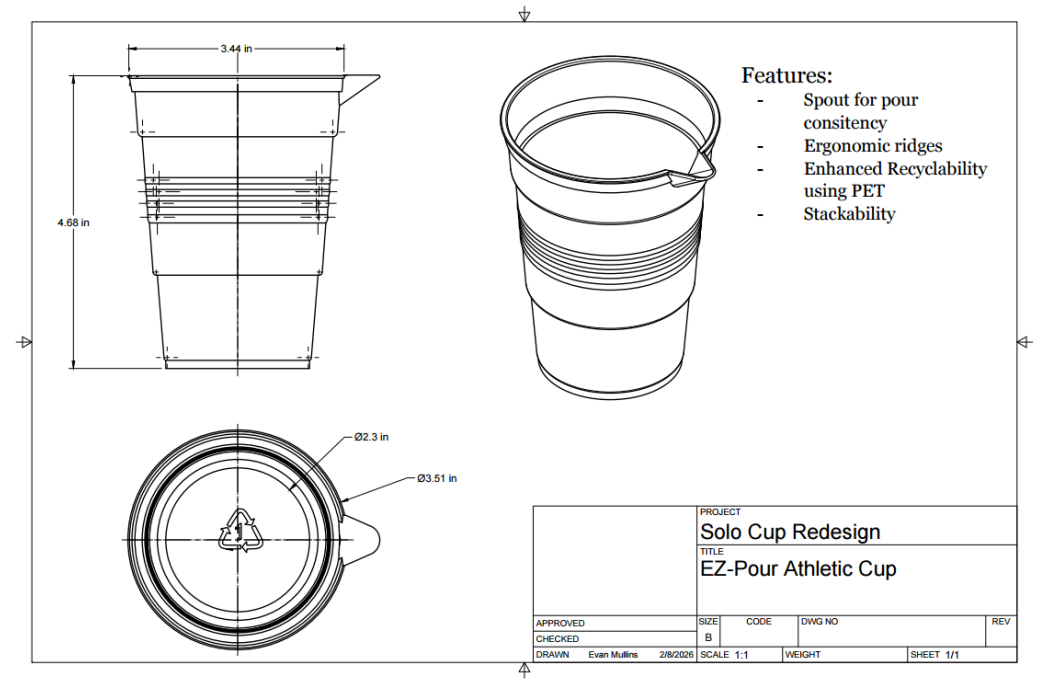
- Allows stackable/easily stored design

Ridges

- Grip

Insulated

- Keeps drinks cold for comfort of user





Final Design



User Needs (Pouring)

User Needs (Stackability)



Thank You



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More Pet: <https://at-machining.com/pet-plastic-machining/>