



# SLIPS<sup>®</sup> Zero<sup>™</sup>

## For Food Packaging

Slippery interior coating for sticky food containers.  
Less squeezing. More product.



# Market Need

Consumers today are often dissatisfied with existing packaging options for the products they buy. Getting that last squeeze of toothpaste out of the tube or pouring that last bit of honey out of the container is rarely successful. This creates waste and the residual product limits its recyclability and potential reusability. Consumers want packaging that is easy to use, maximizes value and makes them feel good about their purchase and its environmental impact.

## Get Unstuck with SLIPS Zero

**SLIPS® Zero™ creates a stable liquid surface on the inside of consumer packaging to allow a smoother emptying of viscous products (e.g., toothpaste, honey, ketchup, yogurt).** The technical approach matches a food-grade plastic resin with an edible oil that stays on the resin like a permanent lubricant.

Similar approaches that have been introduced in the past have had issues with long-term stability because they relied solely on texture at the surface to hold the liquid in place. SLIPS® Zero™ includes additional liquid within the resin layer to replenish the liquid surface over time to meet shelf-life requirements.

The selected resin is molded into the innermost layer of the package through industry-standard extrusion or blow molding processes. Then the edible oil lubricant is spray applied within the molded package through industry-standard spray technology.

### For consumer packaged goods (CPG) manufacturers, SLIPS® Zero™ enables:

**Increased gross margin %** from selling a “premium” viscous product in a small package that can expel almost all the product from the packaging

**Increased gross margin \$** by increasing market share with novel, differentiated packaging designs that convert consumers from competitive offerings



#### Safe for Food

Composed of an edible oil (GRAS-designated) on FDA-approved plastic resins for direct food contact



#### Robust

Meets brand owner shelf-life requirements, delivering consistent performance over the product lifetime



#### Scalable

Utilizes industry-standard application equipment and readily available ingredients



#### Sustainable

Reduces product waste and facilitates package recycling or reuse



#### Flexibility

Gives designers flexibility to use new packaging materials and formats with viscous products

## The Path Forward

**Adaptive Surface Technologies (AST) is eager to collaborate with brand owners and converters who wish to leverage the SLIPS® Zero™ technology to create more innovative packaging solutions.**

AST has prototype containers available to evaluate the proof-of-concept performance with particular food products of interest.

Once the concept is validated, AST will partner with interested companies to refine the prototype solution for the targeted product and integrate these commercially available materials into their package-making and filling processes.

Visit [adaptivesurface.tech](https://adaptivesurface.tech) for video demonstrations and more information on SLIPS® Zero™,

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