



THERMASET® PET

# An Environmentally Responsible and Consumer-Friendly Alternative to Glass

Experience upgraded packaging performance in thermally demanding applications. ThermaSet is a patented heat-set process that allows PET to be used in challenging fill processes, like hot fill, pasteurized and retort.

## Key Features

### Lightweight

ThermaSet PET is 80 – 90% lighter than glass, resulting in fewer trucks on the road which equates to lower freight and fuel costs.

### Shatterproof

PET virtually eliminates breakage. That means less production downtime during filling, less product loss during transport and less risk during consumer handling. A perfect packaging solution for eCommerce and grocery delivery!

### Sustainable

ThermaSet PET is 100% recyclable. It also requires less material and energy to produce compared to glass, while reducing waste due to breakage.

## Jar Options: Sauces, Salsas, Jams, Jellies and Pickles \*



\*Multiple neck finish sizes available.

## Recognition for Graham & ThermaSet



## Performance Benefits

- ✓ Delivers thermal stability above 300°F
- ✓ Increases sidewall rigidity by 50% over standard PET for superior performance; ideal for eCommerce
- ✓ Provides a two-year shelf life at ambient temperatures
- ✓ Eliminates risk of thermal shock
- ✓ Made from FDA-approved material
- ✓ Remains 100% recyclable

## Production Benefits

- ✓ Drops in and runs on existing glass jar fill lines
- ✓ Works with lug, metal CT closures, can-ends and plastic closures
- ✓ Eliminates expensive rotary cappers and composite closures
- ✓ Reduces lost time and money due to breakage
- ✓ Enables use of the vacuum button consumers trust

Contact your Graham Sales Manager for more details or email: [GPCThermaSet@grahampackaging.com](mailto:GPCThermaSet@grahampackaging.com)

[GRAHAMPACKAGING.COM/thermaSet-PET](http://GRAHAMPACKAGING.COM/thermaSet-PET)





## The Real Value of ThermaSet



### Reduced Breakage

Customers achieved significant savings from a reduction in breakages.



### Lower Freight Costs

Allowed 40% more jars to be loaded onto a single truck. Based on a 2018 LCA study.



### Increased Sustainability

Remains 100% recyclable, while reducing waste and energy consumption.



### Improved Customer Experience

Sustainable, lightweight and shatterproof, making it the perfect eCommerce solution. Increases shelf appeal, improves grip and meets shopper preferences for sustainability.








## Applications

- ✓ Pasta and Pizza Sauces
- ✓ Pickles and Relish
- ✓ Salsa and Dips
- ✓ Jelly and Preserves

## Lower Your Environmental Impact by Replacing Glass With ThermaSet PET

To verify the benefits of ThermaSet, Graham commissioned an independent research firm to conduct a life-cycle assessment of 1,000 24-ounce ThermaSet PET pasta sauce jars and compare them to their glass counterparts. The goal of the study was to document the life-cycle environmental impact of these jars. The LCA study found that over multiple environmental impact categories, ThermaSet PET jars had a lower impact on the environment than glass jars.

IMPACT CATEGORY	THERMASET (PET)	GLASS	% REDUCTION FROM GLASS TO PET*
 Global warming potential [kg CO2 eq]	347	557	47%
 Energy [MJ]	7,458	8,910	18%
 Acidification [kg SO2 eq]	1.45	3.19	75%
 Human Health Particulate Air [kg PM2.5 eq]	0.093	1.26	173%
 Smog Air [kg O3 eq]	20.7	46.2	76%

\*Percent difference is calculated as the difference between glass and ThermaSet, divided by the average of both.

There were several other environmental benefits when replacing glass with PET, including that they:

- Release 54% fewer greenhouse gas emissions during manufacturing
- Use 14% less energy to produce
- Require fewer trips and less fuel to ship
- Need less packaging during transport
- Reduce breakage and food waste

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