



# TempShield™

## Thermal Packaging by Reflectix

Reflective insulation packaging for temperature-sensitive products.



REFLECTIVE  
PRODUCTS

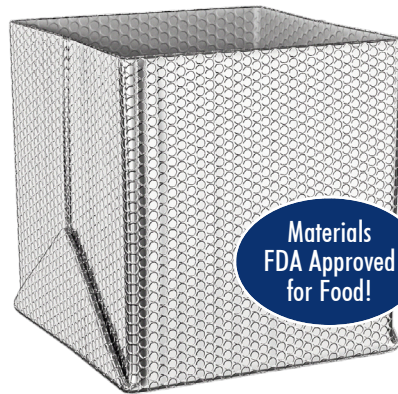
# Custom solutions for every packaging need!

## Product Line-up:



### Thermal Pouches

- Lightweight material saves on shipping costs
- Bubble lining shields shipment from damage
- Custom sizes available



### Gusseted Liner — Leak Resistant

- One-piece, leak-resistant design
- Easy to install in boxes or containers
- FDA approved for food transport



### Thermal Pallet Covers

- Ideal for shipping food or pharmaceutical products
- Maintains stable temperature throughout transport

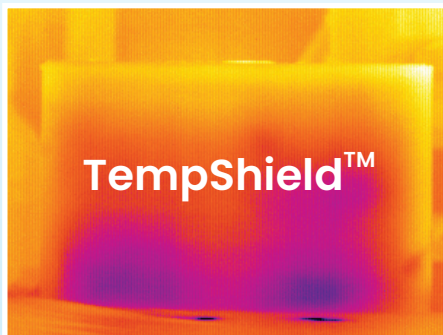
Reduces amount of warehouse storage by 85% when compared to EPS material.



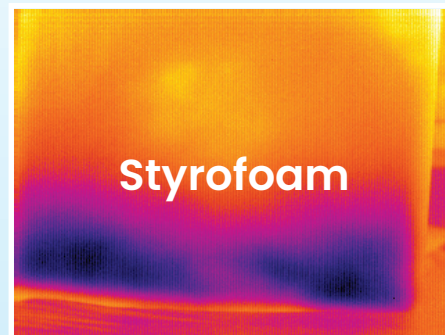
## Why reflective packaging?



- Reflects up to 96% of radiant heat which helps to maintain internal temperature
- Reduces warehouse storage by up to 85% compared to expanded polystyrene (EPS)
- Lightweight yet durable—reduces shipping costs
- FDA-compliant, food safe, and is a moisture barrier



vs.



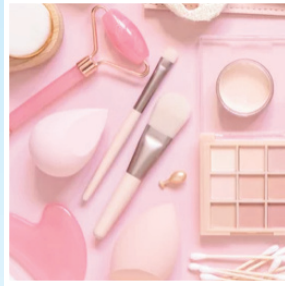
Photos above show thermographic images of a TempShield™ lined corrugated box and a styrofoam cooler. Tests were performed at a leading midwestern university. Images were taken with six Freezer Brix in each container after five minutes. These images show the outside temperature of each container. The blue indicates the cold energy escaping.



# Industries



Perishable foods



Cosmetics



Floral



Pharmaceuticals



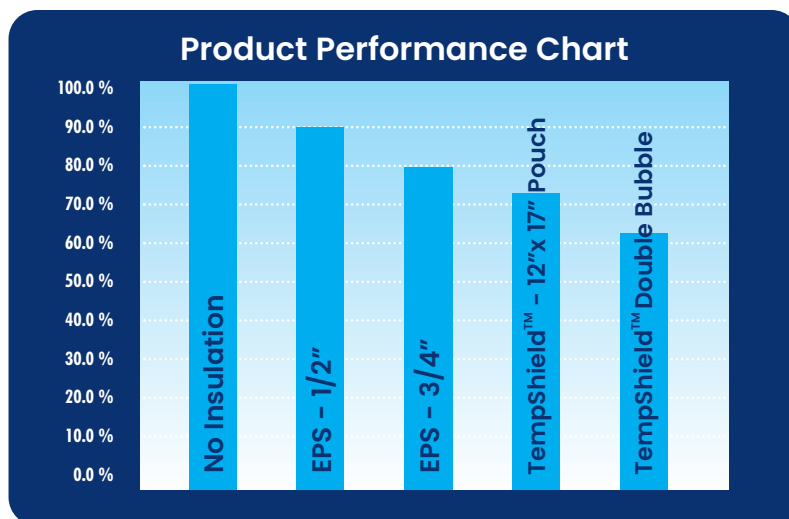
Biotech and Labs

## Material Comparison – 20 hr. test

Table and graph below show the results of a 20 hr. test using 3.5 lb. blocks of ice packaged in various configurations. TempShield™ outperformed them all! After 20 hours the ice had lost 63.4% of its initial weight!

Material:	Starting Weight of Ice (lbs):	Residual Weight of Ice After 20 hrs. (lbs):	Weight of Ice Melted (lbs):	Ice melted after 20 hrs. as a % of initial weight of ice (%):
No Insulation	3.531	0.000	3.531	100.0
EPS - 1/2"	3.540	0.356	3.184	89.9
EPS - 3/4"	3.551	0.741	2.810	79.1
TempShield™-MFL 12"x17" Pouch	3.530	0.904	2.626	74.4
TempShield™ Double Reflective/Double Bubble	3.557	1.303	2.254	63.4

Graph shows melting percentages after 20 hrs.



**Bulk rolls available in various widths and lengths**

## Proven Applications:

### Perishable Foods

- Seafood, Meat and Poultry
- Beverages; i.e. wine, juices
- Gourmet Foods
- Baked Goods
- Dairy; i.e. ice cream, milk, cheese
- Confections; i.e. candies, chocolates

### Medical

- Pharmaceuticals
- Healthcare
- Clinical Labs
- Organ Transport
- Prescription Labs
- Biotechnology
- Blood Transport
- Cryogenic Research
- Medical Supplies; i.e. implants
- Genetics, DNA

### Scientific / Industrial

- Chemicals
- Solders
- Ink Manufacturers
- Animal Fluids
- Adhesives
- Bio Chemicals

### Animal Health

- Animal Fluids / Animal Labs
- Veterinarian Products and Supplies
- Banquet Facilities

### Other

- Flowers
- Cosmetics/Perfumes
- Tropical Fish
- Freight Companies

# Tested. Proven. Certified.

## Backed by Independent Lab testing (Double Reflective, Double Bubble)

Vapor Transmission .....	.000
Mold & Mildew .....	No Growth
Emittance .....	0.04
Tensile Strength.....	3.7 N/mm
Pliability .....	No Cracking
Thermal Performance.....	ASTM C518
Fungus Resistance .....	MIL Std 810B Method 508
Water Vapor Transmission .....	ASTM E96
Tensile Strength.....	ASTM D751
Emittance Testing .....	ASTM C1371

Raw Materials Comply with USDA & FDA Regulations  
Reflectance Measurements in four Wavelengths

All tests on TempShield™ insulation are performed at either nationally approved independent laboratories or leading universities. Tests are performed to current American Society of Testing and Materials (ASTM) Standards when a standard exists.

- Complies with USDA & FDA standards
- ASTM and MIL tested
- Low emittance (.04)
- High tensile strength
- Resistant to fungi, mold, mildew



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