



Thermal Pouches

This lightweight material saves on shipping, while the cushioned bubble lining shields the shipment from possible damage.



Materials FDA Approved for Food!

Gusseted Liner - Leak Resistant

This is a one piece durable liner that is quick and easy to set up.



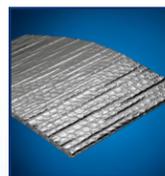
Thermal Pallet Covers

Our Pallet Covers can be used for the transport of food and pharmaceutical products that are sensitive to changes in temperature.

Reflectix, Inc.

Reflectix has solely dedicated itself to the process of reflective technology and is the world's largest manufacturer of reflective insulation. Founded in 1979, we have built a respected reputation in the markets we serve.

Reflectix manufactures the TempShield™ insulation in a variety of configurations. Our goal is to revolutionize the Thermal Packaging Industry with our reflective insulation products.



Reflective Technology

Radiant heat, the major source of heat flow, is energy in the form of infrared waves. It travels at the speed of light, even through a vacuum, and is either transmitted through, absorbed into, or reflected, by any material it contacts. TempShield™ reflects up to 96% of the radiant energy striking its surface.

Infrared works in the same way as visible light; heat is generated when this energy is absorbed. Common insulation products tend to absorb a large percentage of the radiant energy they encounter. However, tests have shown that one sheet of aluminum in the center of an airspace reflects 96% of radiant heat. This means that heat rays pass through it at a rate of only 4%. Properly installed TempShield™ reflective insulation takes full advantage of this by using one or two such surfaces separated by encapsulated air.

Features and Benefits

Our Capabilities Include: Sheet Cutting, Custom Sizing/Width and Length, Splicing and Pouches.

- Maintains temperature ranges
- Saves inbound/outbound freight up to 60%
- Reusable
- Offers thermal value properties
- A vapor / moisture barrier
- Flexible, tough and durable
- Stops heat transfer by radiation (75% of heat transfer is radiant)
- Resistant to fungi, mold, mildew
- Enhances EPS thermal protection
- Inhibits odor transfer
- Helps ensure product quality, taste, texture and color
- Reduces amount of warehouse storage by 85% when compared to EPS material
- Gives protective cushioning
- Thin and lightweight
- Low emissivity (does not allow large amounts of energy to pass through)
- Environmentally safe/easy to dispose
- FDA approved for incidental contact with food



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

Innovators in Packaging

Proven Applications

Perishable Foods:

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

Medical:

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

Scientific/Industrial:

- Chemicals
- Solders
- Ink Manufacturers
- Adhesives
- Bio Chemicals

Animal Health:

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

Other:

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



Perishable Products

For extended protection of extremely perishable products, dry ice and or other refrigerants can be placed into the package without damage to the liner.

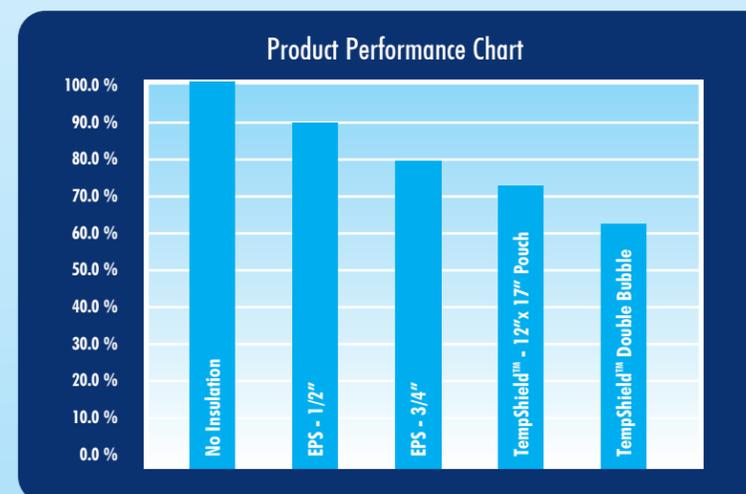
Product Versatility

TempShield™ has a proven record of temperature control. We can blend materials to suit your exact need.

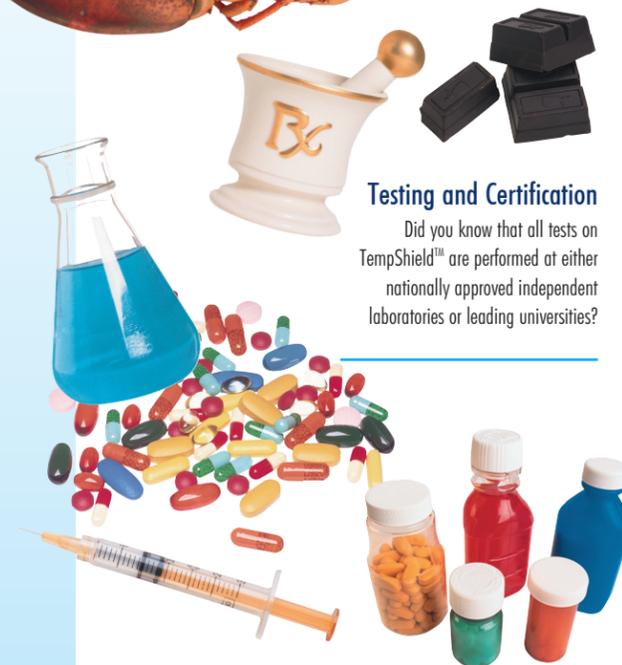
Material Comparison - 20 Hour Test

Table and graph below shows the results of a 20 hour test using 3.5 lb. blocks of ice packaged in various configurations. TempShield™ performed best. 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" x 17" Pouch	3.530	0.904	2.626	74.4
TempShield™ Double Reflective / Double Bubble	3.557	1.303	2.254	63.4



Graph above shows melting percentages after 20 hours.



Testing and Certification

Did you know that all tests on TempShield™ are performed at either nationally approved independent laboratories or leading universities?

Advantages in Using TempShield™

TempShield™ has a distinct advantage over competing products. Our experience, knowledge and manufacturing capabilities have made us the world leader in reflective technology.

TempShield by Reflectix®

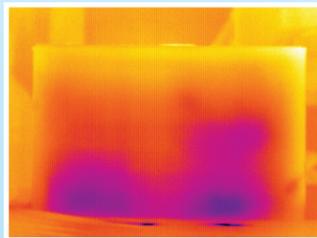
Innovations in Thermal Packaging

Testing & Certification (Double Reflective, Double Bubble)

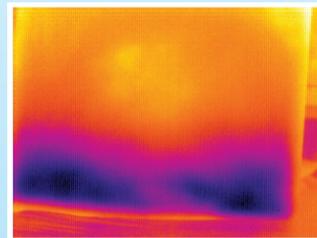
Vapor Transmission000	Mold & Mildew	No Growth
Emittance	0.04	Tensile Strength	3.7 N/mm
Pliability	No Cracking		
Thermal Performance		ASTM C518	
Fungus Resistance		MIL Std 810B Method 508	
Water Vapor Transmission		ASTM E96	
Tensile Strength		ASTM D751	
Emittance Testing		ASTM C1371	

Raw Materials Comply with USDA & FDA Regulations
Reflectance Measurements in 4 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.



TempShield™



Styrofoam

Photos above show thermographic images of a TempShield™ lined corrugated box and a styrofoam cooler. Tests were performed at a leading mid-western university. Images were taken with six freezer brix in each container after 5 minutes. These images show the outside temperature of each container. The blue indicates the cold energy escaping.

Still have questions? Needing more information? Reflectix can help.

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Easy-to-Use Thermal Insulating Materials That Provide
High-Efficiency Performance for a Wide-Range of Packaging Applications