

HOW TO: Guidelines on Packaging Perishable Products

PACKAGE USING DRY ICE

1. Line the insulated container with at least one 2-mil. plastic bag and sufficient absorbent material above and below the product.
2. Double bag products that can thaw or melt.
3. Arrange products compactly. Leave space around product for dry ice. Close bag securely.
4. Place sufficient amount of dry ice around product. Use dry ice block, pellets or snow.
5. Pack tightly and fill void spaces with dunnage packaging material to prevent product movement.
6. Place lid on insulated container. DO NOT seal completely — venting is needed to allow carbon dioxide gas to escape.
7. Place insulated container inside corrugated box.
8. Securely tape corrugated box with plastic carton sealing tape. Complete the required paperwork and labeling.

PACKAGE USING REFRIGERANT PACKS

1. Line the insulated container with at least one 2-mil. plastic bag and sufficient absorbent material above and below the product.
2. Arrange products compactly in the insulated container, allowing space for refrigerant.
3. Place sufficient amount of refrigerant on top and around product. Pack tightly and fill void spaces with dunnage packaging material to prevent product movement.
4. Close the liner securely.
5. Place lid on insulated container and seal container with vinyl or plastic carton sealing tape.
6. Place insulated container inside corrugated box.
7. Close box securely. H-seal the corrugated box with plastic seal tape. Apply tape over all box flaps and seams using a minimum of two (2) inches to secure and restrict air infiltration.

PACKAGE USING COLD PACKS AND DRY ICE

Package conditioning for perishable product shipment, extended 10-20 transit hours

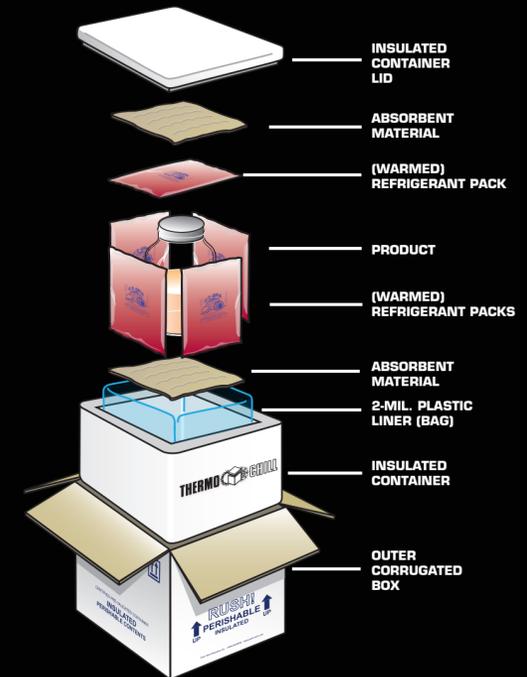
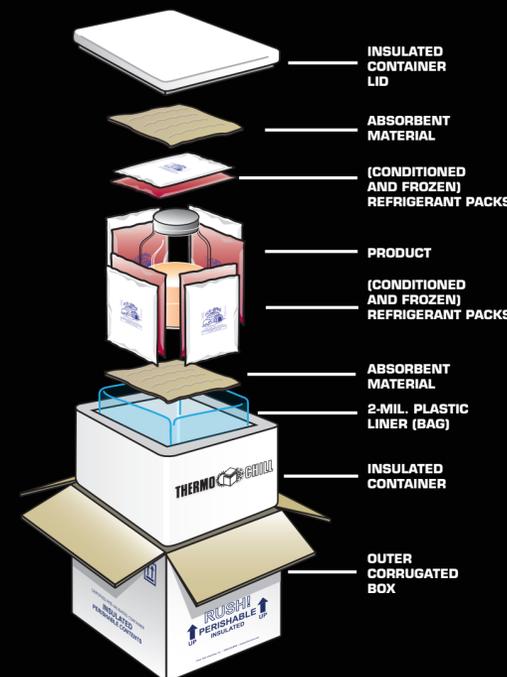
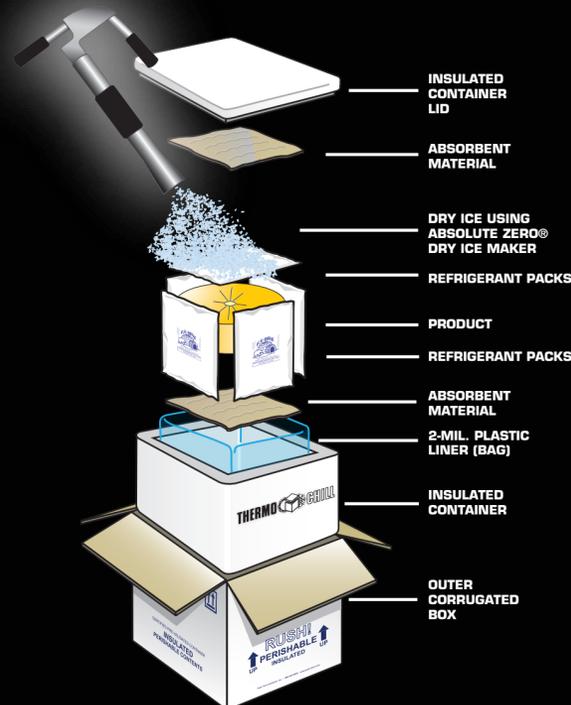
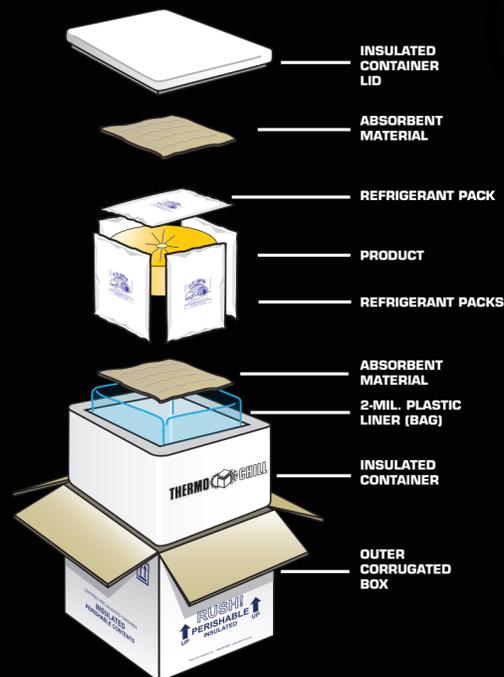
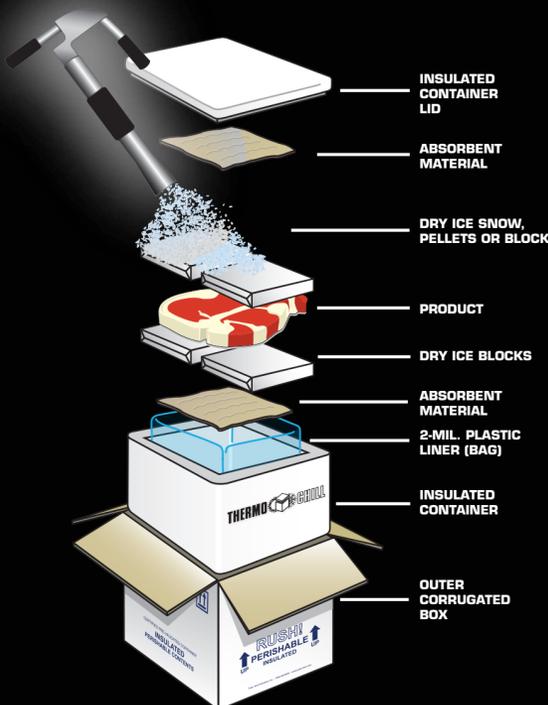
1. Line the insulated container with at least one 2-mil. plastic bag and sufficient absorbent material above and below the product.
2. Arrange products compactly, allowing space for cold packs.
3. Place sufficient number of cold packs on top and around product. Pack tightly and fill void spaces with dunnage packaging material to prevent product movement.
4. Fold or close the liner.
5. Apply 1 to 1-1/2 pounds of dry ice snow above secured liner.
6. Place lid on insulated container. DO NOT seal completely — venting is needed to allow carbon dioxide gas to escape.
7. Place container inside corrugated box.
8. Securely tape corrugated box with plastic carton sealing tape.

PACKAGE USING A CONTROLLED TEMPERATURE RANGE

1. Line the insulated container with at least one 2-mil. plastic bag and sufficient absorbent material above and below the product.
2. Place product inside the insulated container. Surround product with warm, leakproof gel refrigerant.
3. Place desired temperature conditioned refrigerant packs on top and around the product as a buffer control.
4. Place sufficient amount of proper refrigeration on top and around the temperature buffer refrigerant packs. Pack tightly and fill void spaces with dunnage packaging material to prevent product movement.
5. Close the liner securely.
6. Place lid on insulated container and seal with vinyl or plastic sealing tape.
7. Place container in outer corrugated box.
8. Close box securely. H-seal the corrugated box with plastic seal tape. Apply tape over all box flaps and seams using a minimum of two (2) inches to secure and restrict air infiltration.

PACKAGE USING WARMED REFRIGERANT

1. Line the insulated container with at least one 2-mil. plastic bag and sufficient absorbent material above and below the product.
2. Place product inside the insulated container. Surround product with warm, leakproof gel refrigerant.
3. Close the inner bag securely.
4. Pack tightly and fill void spaces with dunnage packaging material to prevent product movement.
5. Place lid on insulated container and seal with vinyl or plastic sealing tape.
6. Place container in outer corrugated box.
7. Close box securely. H-seal the corrugated box with plastic seal tape. Apply tape over all box flaps and seams using a minimum of two (2) inches to secure and restrict air infiltration.



We highly recommend you conduct your own shipping and storage test to determine the proper amount of coolant that will perform consistently with your product shipments. (Suggested: Temperature probes should be positioned in the product during testing.)

* Caution: dry ice is dangerous to handle and subject to special handling and labeling. Contact your dry ice supplier and shipping carrier for handling and shipping instructions. ** Caution: Do not warm ice packs in microwave oven. When warming packs, use caution — the packs may be hot.

Polar Tech
INDUSTRIES, INC.
TEMPERATURE SENSITIVE PACKAGING

Polar Tech Performance Testing

1. Validation or Verification compliant testing and documents
2. Independent lab validation testing
3. In-house testing labs and Thermal Package analysis
4. Associations and packaging engineer alliances

Polar Tech Insulated Containers

1. Standard 2-5 day shipments
2. Overnight 1-2 day shipments
3. Polar Express 1-3 day shippers
4. Global Extreme 2 to over 12 days international shipper
5. Foam panels, customer insulated stock box
6. Insulated shipping envelopes – 1-2 day shipments
7. Insulated dry ice delivery and storage systems

NEW! 24/7
ABSOLUTE ZERO®
DRY ICE SNOW MAKER

LOW COST • HIGH YIELD • DURABLE • EASY
Ergonomically Engineered and Constructed
SAFE • LIGHTWEIGHT • DURABLE STAINLESS STEEL

Polar Tech Shipping Room Supplies

1. Cushioning materials
2. Tapes/dispensers and Labels/dispensers
3. Temperature monitors/indicators
4. Absorbent materials
5. Poly bags
6. Custom corrugated products and more

Polar Tech Customer Service

1. All products are always in stock!
2. Trained personnel to assist you in all applications
3. Personalized custom products
4. Thermal performance testing profiles
5. How to: Guidelines on Packaging Perishable Products POSTER
6. All major credit cards accepted 1-800-423-2749
7. On time delivery
8. Manufacturers of consistent, high-quality temperature control products
9. 24 hour fax and email ordering email: sales@polar-tech.com, fax: 1-815-784-9009