

# GUIDE: SELECTING THE RIGHT SHIPPER

Sonoco ThermoSafe offers an extensive line of insulated containers for the safe storage and delivery of temperature-sensitive products. Our selection includes various sizes of EPS (Expanded Polystyrene), PUR (Polyurethane), and VIP (Vacuum Insulated Panels) insulated shippers and containers, that are each sold separately (no refrigerants included), as well as, various lines of ready-engineered systems - such as Via®, Certis®, and Envoy® - that have been designed, tested, and qualified to perform per required criteria. Information regarding insulation properties and other specific characteristics of shippers and containers can be found on the corresponding product pages.

**When selecting a container and refrigerant to best maintain your product temperature and protect against physical damage during shipment, there are a number of different factors that must be considered. For example:**

- Does the product need to remain frozen, refrigerated, or at controlled room temperature?
- How long will it be in transit?
- Is the product of uniform shape or is it irregular?
- What ambient temperatures do you expect?

The following guidelines are intended to help you select the best insulated container for shipping your product. We strongly recommend that you use them as the basis for selecting a container and/or refrigerant for testing and evaluation. Sonoco ThermoSafe offers thermal package design, testing, and qualification services through ISC Labs®. For more information, see page 36 of this catalog or call Customer Service at 800-323-7442.

MATERIAL	EXPANDED POLYSTYRENE (EPS)	POLYURETHANE (PUR)	VACUUM INSULATED PANELS (VIP)
WALL THICKNESS	¾" - 2¼"	1" to 3"	½" - 1"
BENEFIT SUMMARY	<ul style="list-style-type: none"> <li>• Economical</li> <li>• Lightweight</li> <li>• Recyclable</li> <li>• Excellent dry ice sublimation</li> </ul>	<ul style="list-style-type: none"> <li>• Construction offers great shock absorption and cushioning during shipping &amp; handling</li> <li>• Withstands &gt;5,000 lb crush-compression</li> </ul>	<ul style="list-style-type: none"> <li>• Reduces refrigerant requirements (usage)</li> <li>• Greater net payload utilization</li> <li>• Reduction in shipping weight &amp; freight cost</li> <li>• Environmentally neutral, recyclable</li> </ul>
TRANSIT DURATION	≤ 24 hrs < 48 hrs	Ideal for > 48 hrs	Extended durations
IDEAL FOR	<ul style="list-style-type: none"> <li>• Safe storage &amp; delivery of refrigerated or frozen material (pharmaceuticals, laboratory specimens, serums, vaccines, human organs, culture pack, and nuclear and isotope materials)</li> </ul>	<ul style="list-style-type: none"> <li>• Highly temperature-sensitive shipments from moderate to extreme ambient temperature exposure</li> <li>• Heavier and denser payloads</li> <li>• Rigid polyurethane insulation thick walls</li> </ul>	<ul style="list-style-type: none"> <li>• Extended shipping times and/or distances</li> <li>• International shipments</li> <li>• Pharmaceuticals and vaccines</li> </ul>
CONSTRUCTION	<ul style="list-style-type: none"> <li>• Molded expanded polystyrene</li> </ul>	<ul style="list-style-type: none"> <li>• Outer corrugate and interior corrugate liner</li> </ul>	<ul style="list-style-type: none"> <li>• Vacuum insulated panels</li> <li>• Outer corrugate</li> </ul>
COMPONENTS	<ul style="list-style-type: none"> <li>• Shippers sold separately, with or without outer corrugate</li> </ul>	<ul style="list-style-type: none"> <li>• Flexible, open cell polyurethane plug (cushions and insulates content)</li> </ul>	N/A