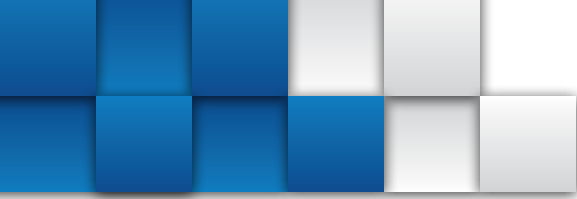


# TEMPERATURE ASSURANCE PACKAGING

...because every degree matters®





VWR services the industrial, government, life science, education, electronics, and pharmaceutical markets as a leading worldwide distributor of scientific equipment, supplies, chemicals, and furniture.

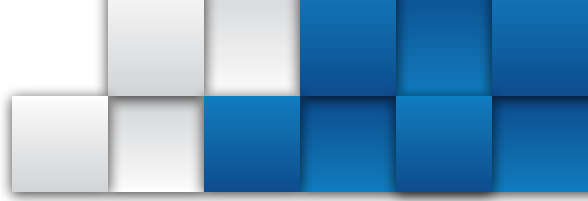
Through a combination of strategic partnerships with world respected manufacturers and continuous improvement of systems and services, VWR supplies over 1,000,000 products to the scientific community on time, every time. That's the key to the science of supply.

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Sonoco ThermoSafe, a unit of Sonoco (NYSE:SON), is a leading global provider of temperature assurance packaging for the safe and efficient transport of pharmaceuticals, including blood, plasma, organs, tissues, or any other temperature sensitive specimens and products.

Sonoco ThermoSafe shipping solutions mitigate risk for our customers and ensure product efficacy throughout the extremes of a supply chain. With operations in North America, South America, Europe and Asia, Sonoco ThermoSafe has a vast product offering featuring industry-leading technology that encompasses refrigerated, frozen or controlled room temperature applications. In addition, Sonoco ThermoSafe's ISC Labs® design and testing services deliver individualized and innovative packaging solutions along with qualification and validation services to meet all regulatory requirements.



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TO ORDER, CALL US AT: 1-800-932-5000

## WHAT KIND OF **PROTECTIVE PACKAGING** DOES YOUR PRODUCT NEED?

### ■ Does your product need to maintain a specific temperature?

#### YES

My product needs to remain frozen, refrigerated, or at controlled room temperature.

Proceed to next step.

#### NO

My product doesn't need to maintain a specific temperature, but I need a reliable shipping solution for my clinical or laboratory specimens that can withstand moderate shipping conditions and meets government regulations for safe transport.

See pages 31-37 for our line of diagnostic and infectious shippers.



### ■ Are you looking for a complete solution for a specific temperature range and time duration?

#### YES

##### 1-5 DAYS (24-120 HOURS)

See pages 16-25 for our line of **Ready-Engineered Insulated Shipping Solutions**, available in an array of temperature ranges and shipping durations.



#### NO

My product doesn't require an engineered solution, but I am interested in insulated shippers.

##### 1-2 DAYS (24-48 HOURS)

See pages 6-7 for our extensive line of **expanded polystyrene (EPS) insulated shippers**—the ideal solution for the safe storage and delivery of refrigerated or frozen materials.



##### ≥ 2 DAYS (≥48 HOURS)

See pages 8-9 for our high performance **polyurethane (PUR) containers**, offering greater insulating capability that can meet the needs of the most demanding temperature-sensitive products.



##### ≥ 3 DAYS (≥72 HOURS)

See page 10 for our **vacuum insulated panel (VIP) shippers** with thermal performance that far surpasses conventional foam boxes. This is the best choice for longer duration shipments of high value, temperature-sensitive products.



**Need custom design or testing services?**

See page 41 to learn about services available from ISC Labs®.

### ■ **NEXT STEP:** Selecting the Right Refrigerant (p. 11)

## 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 ChillTech®, 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 41** of this catalog or call Customer Service at **1-800-932-5000**.

Material	Expanded Polystyrene (EPS)			Polyurethane (PUR)	Vacuum Insulated Panels (VIP)
Wall Thickness (in)	¾" - 1 ⅛"	1 ⅙" - 2¼"	> 1 ½"	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 and 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> </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>• Rigid polyurethane insulation</li> <li>• Outer corrugate and interior corrugate liner</li> </ul>	<ul style="list-style-type: none"> <li>• ½" to 1" 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

\*Ambient temperatures affect package performance.



# ThermoSafe® InsulatedShipper

Our extensive line of EPS insulated containers offer the ideal solution for the safe storage and delivery of many refrigerated or frozen materials. This includes pharmaceuticals, laboratory specimens, serums and vaccines, human organs, culture pack, and nuclear and isotope materials.

## PATENTED MODULAR SYSTEM

Creates a perfect match between payload and container capacity

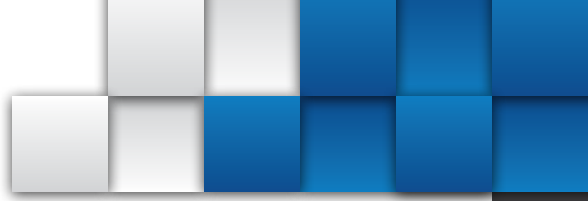


- Patented components—basic container (body and dome lid), stackable rings—enable you to just add rings for added height
- Increase packing flexibility in warehouse—only one box footprint plus rings to vary capacity as needed
- Design features include dome lids, molded-in handles, rounded corners and edges, and recessed strapping grooves
- Designed to maximize temperature control and withstand the hazards of transport



Construction		EPS/Foam Only		Wall Thickness (in)
EPS Only	EPS In Corrugated Carton	Inner L x W x H (in)	Outer L x W x H (in)	
89413-338	73320-200	24 x 18 x 21	26 x 20 x 23	1
89413-340	89413-342	24 x 13 7/8 x 12 1/2	28 1/4 x 17 1/4 x 15 5/8	1 1/8
89413-348	89413-350	23 3/8 x 14 3/8 x 23	27 7/8 x 19 x 28	2 1/4
89413-360	89413-362	21 9/16 x 13 7/16 x 10 5/8	24 x 15 7/8 x 12 3/8	1 1/8
14100-452	15714-468	21 x 15 5/8 x 15 1/4	24 x 18 x 17 7/8	1 1/8
89413-364*	73320-026*	20 X 12 X 4	22 5/8 x 14 7/8 x 7 1/4	1 1/2
89413-370*	89413-372*	19 1/4 x 12 3/8 x 12 1/4	23 5/8 x 16 3/4 x 16 1/2	2
89413-374	15713-545	19 x 14 5/8 x 10 3/8	22 3/8 x 18 1/8 x 13 3/8	1 1/2
15713-672*	15714-704*	19 3/8 x 12 3/8 x 12 1/4	22 3/8 x 15 3/8 x 15 3/8	1 1/2
89413-376		2" RING		1 1/2
89413-378	89413-380	17 1/4 x 10 1/4 x 8	20 1/4 x 13 3/8 x 11	1 1/2
15713-664*	—	17 1/4 x 10 1/4 x 5	20 1/4 x 13 1/4 x 8	1 1/2
15713-662		3" RING		1 1/2
89413-384*	95054-978*	17 x 10 x 13	21 1 1/16 x 14 7/16 x 16 3/4	2
89495-994	15714-513	17 1/8 x 10 1/8 x 10 5/8	20 1/4 x 13 1/4 x 13 3/4	1 1/2
89413-386*	95054-980*	17 x 17 x 12	18 5/8 x 13 3/8 x 9 5/8	2
89413-388		3" RING		
89413-390	89413-392	17 x 11 3/4 x 8	18 5/8 x 13 3/8 x 9 5/8	3/4
89413-394	89179-608	17 x 9 7/8 x 16 1/2	20 3/8 x 13 1/4 x 19 1/2	1 1/2
89413-396	14100-482	16 3/4 x 13 3/4 x 12 5/8	19 1/2 x 16 1/2 x 15 1/8	1 1/2
14100-448	15713-551	16 3/4 x 9 3/4 x 12 5/8	20 1/4 x 13 1/4 x 15 3/4	1 1/2
89413-398	89413-400	16 1/8 x 11 1/2 x 6"	19 1/4 x 14 1/2 x 9	1 1/2
89413-402	89413-404	15 1 3/16 x 12 1 3/16 x 8 1/2	18 1/8 x 15 1/8 x 10 7/8	1
89413-406	89413-408	15 3/8 x 9 5/8 x 7 7/16	17 x 11 1/4 x 9	3/4
89413-410	89413-412	15 X 10 X 6	18 x 13 3/8 x 9	1 1/2
89413-414	89413-416	13 3/4 x 11 x 6 3/4	16 1/2 x 13 3/4 x 8 1/4	1 1/8
89413-422	89413-424	13 1/2 x 13 x 10 1/2	17 1/2 x 16 1/2 x 13 1/2	1 3/4
89413-430		3" RING		
89413-432	15714-465	13 3/4 x 9 1/4 x 6	15 1/2 x 11 1/2 x 8	1
14100-454*	15713-510*	12 1/2 x 12 1/2 x 12	15 1/2 x 15 1/2 x 15	1 1/2

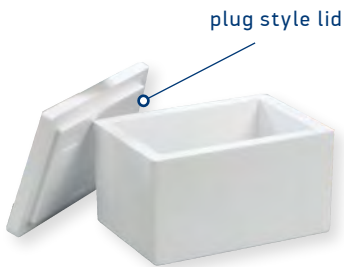
+ Top and bottom are approximately equal halves, not body and lid construction.  
\* Dome style lid.



- Choose EPS only or EPS assembled in 200 lb [91 kg] test corrugated carton
- Choose insulating walls of 3/4 to 2 1/2 in. [19 to 57 mm]

### LID STYLES

The images below show the difference between a plug-style and dome-style lid. The model numbers with the \* next to them in the table to the right are those that are molded with a dome-style lid.



Construction		EPS/Foam only		Wall Thickness (in)
EPS Only	EPS in Corrugated Carton	Inner L x W x H (in)	Outer L x W x H (in)	
89413-434*	14100-474*	12 1/2 x 12 1/2 x 9	15 1/2 x 15 1/2 x 12	1 1/2
89413-436*	89413-438*	12 1/2 x 12 1/2 x 7	15 1/2 x 15 1/2 x 10	1 1/2
89413-444		3" RING		1 1/2
	89413-448+	12 1/4 x 8 1/2 x 5 1/4	15 1/2 x 11 3/4 x 8 1/4	1 1/2
15714-506	15713-543	12 x 12 x 11 1/2	16 x 16 x 15 1/2	2
89413-450*	89413-452*	12 x 12 x 9 3/4	15 1/4 x 14 x 11 1/2	1 1/8
14100-420*	15713-623	11 5/8 x 9 7/8 x 9	15 x 13 1/4 x 12	1 1/2
73320-188*	14100-402*	11 5/8 x 9 7/8 x 7	14 7/8 x 13 1/4 x 10 1/8	1 1/2
89413-454*	89413-456*	11 3/4 x 10 x 5	15 x 13 1/4 x 9 1/16	1 1/2
89413-458		2" RING		1 1/2
15714-511	15714-500	11 x 11 x 11 5/8	14 x 14 x 14 5/8	1 1/2
89413-460	—	10 3/4 x 6 3/4 x 5 1/2	12 13/16 x 9 9/8 x 8	1
82028-390	89413-464	10 1/2 x 8 x 8 1/2	14 x 11 1/2 x 12	1 3/4
14100-406	14100-410	10 1/2 x 7 1/4 x 10	13 3/4 x 10 1/2 x 13 1/2	1 1/2
14100-428	14100-432	10 x 10 x 7	14 x 14 x 10	1 3/4
89413-466	89413-468	9 1/2 x 7 1/2 x 10 3/8	11 x 9 x 12	3/4
89413-470	89202-276	9 1/2 x 7 1/2 x 8 3/8	11 x 9 x 10	3/4
82028-388	89413-472	9 1/2 x 7 1/2 x 5 5/8	11 x 9 x 7	3/4
89413-474+	89413-476+	9 3/8 x 8 3/8 x 8 3/8	12 1/2 x 11 1/4 x 11 1/8	1 1/2
89413-478+	89413-480+	9 3/8 x 8 3/8 x 6 3/8	12 1/2 x 11 1/4 x 9 1/2	1 1/2
89413-482+	14100-458+	9 1/2 x 8 1/4 x 4 5/8	12 x 11 1/4 x 7 7/8	1 1/2
14100-400*	14100-414*	8 x 5 7/8 x 11 1/2	11 x 9 x 14 1/2	1 1/2
15713-702*	14100-412*	8 x 5 7/8 x 8 7/8	11 x 9 x 11 7/8	1 1/2
15714-486*	15714-522*	8 x 5 7/8 x 7	11 x 9 x 10	1 1/2
15713-600*	15713-700*	8 x 5 7/8 x 4 1/4	11 x 9 x 7 1/4	1 1/2
89413-486	89413-488	7 x 7 1/4 x 7 1/2	11 3/4 x 11 3/4 x 11 1/4	2
15713-607	15713-608	6 1/4 x 5 3/4 x 7 3/4	11 1/4 x 10 1/2 x 12 5/8	2 1/4
15713-544	15713-507	6 1/2 dia. x 4 high	9 1/2 x 9 1/2 x 6 7/8	1 1/2
14100-436	14100-434	6 1/4 x 4 1/4 x 5 1/2	9 x 7 1/2 x 8	1 1/2
15713-537	14100-430	6 1/4 x 4 1/4 x 5 1/2	11 x 9 x 10 1/4	2 1/4
89413-490	95042-406	6 x 4 1/2 x 2 1/2	8 x 6 1/2 x 4 1/2	1
15713-610+	—	5 7/8 x 4 3/8 x 3	8 x 6 x 5 1/4	1



**NOTE:** To calculate the approximate outside dimension of EPS in corrugated carton, add 5/8" x 5/8" x 7/8" to the above listed outer dimensions.



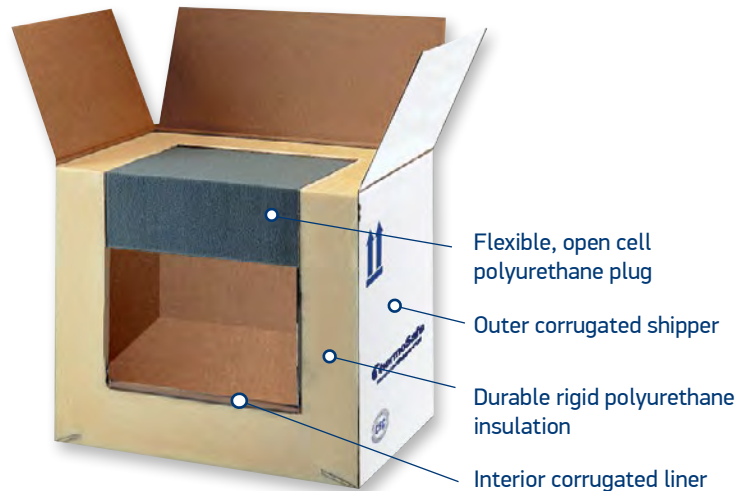
# ThermoSafe®

## InsulatedShipper-PUR

These high performance polyurethane containers meet the needs of the most demanding temperature-sensitive payloads. Polyurethane insulation offers greater insulating capability when compared to same size EPS containers.

Thick walls and 200 lb [91 kg] outer corrugate offer protective shock absorption and cushioning during shipping and handling.

- Protects highly temperature-sensitive shipments from mild to extreme ambient temperature exposure
- Provides extensive protection for long range journeys
- Durable one-piece closed-cell polyurethane foam insulated shippers are CFC and HCFC-free and comply with international clean air regulations
- Withstands crush compression in excess of 5,000 lb [2 tons]
- Flexible polyurethane foam plug seals the top, cushions and insulates contents, and vents dry ice



Rigid, one-piece, three-layer laminate construction provides excellent temperature protection, exceptional strength, and durability.





PALLET		CASE		Wall Thickness	Dimensions L x W x H (in)		Empty Weight (lb)
Model	Qty	Model	Qty		Inner	Outer	
89496-678	2	89496-680	1	3"	30½ x 21¼ x 19¾	37¾ x 28 x 24¼	26
89496-682	12	14100-466	1	2"	33¼ x 9¼ x 13½	28 x 14 x 20¾	9½
89496-684	4	89496-686	1	3"	22¼ x 17½ x 19¾	29 x 24¼ x 24¼	17½
89496-688	12	14100-461	1	1½"	19 x 15¾ x 13¾	22¾ x 19½ x 19½	9
89496-690	12	89496-692	1	3"	18½ x 18¼ x 16¾	25¼ x 25 x 24¾	17½
89134-962*	8	14100-468	1	2"	18½ x 18¼ x 16¾	23¼ x 23 x 24	14
89401-704	12	89496-696	1	2"	18½ x 14½ x 12	23¼ x 19¼ x 19¼	10
89496-698	12	89496-700	2	3"	17½ x 9½ x 14½	24¼ x 16¼ x 21¾	12
73320-204	18	89496-702	2	2"	17¼ x 9½ x 15¼	22 x 14¼ x 22½	9
89496-704	12	89496-706	2	1½"	16 x 16 x 13½	19¾ x 19¾ x 19¼	8
89496-708	18	14100-464	2	2"	16¼ x 9¼ x 10¼	21 x 14 x 17½	7½
89496-710	36	89496-712	2	1"	15¼ x 10¾ x 11	18 x 13½ x 15¼	4½
89496-714	24	95054-984	2	1½"	15 x 13 x 11	18¾ x 16¾ x 16¾	6½
89496-716	18	89496-718	2	2"	14¼ x 10 x 15¼	19 x 14¾ x 22½	8
89496-720	32	89496-722	2	2"	14 x 8 x 10	18¾ x 12¾ x 17¼	6
89496-724	8	89496-726	1	3"	13½ x 13½ x 16½	20¼ x 20¼ x 24½	14½
89496-728	45	89496-730	4	1"	12¼ x 12¼ x 8	15 x 15 x 12¼	4
87004-421	18	14100-472	2	3"	12 x 10 x 13	18¾ x 16¾ x 21¼	10½
89496-732	8	89496-734	1	3"	11½ x 11½ x 32⅞	18¼ x 18¼ x 36⅞	16
82030-627	24	89496-736	4	3"	11 x 8½ x 7	17¾ x 14⅞ x 14¾	7
89496-738	36	14100-462	3	2"	11 x 8 x 7	15¾ x 12¾ x 14¼	4
89496-740	60	89496-742	8	1"	10¾ x 7 x 5	13⅝ x 9⅞ x 9¼	2
89496-744	45	89496-746	4	1"	10 x 10 x 8	12¾ x 12¾ x 12¼	3
89496-748	36	89305-306*	8	1½"	9¼ x 7 x 7¼	13 x 10¾ x 13	3
89496-750	18	89202-274	2	3"	8 x 7⅞ x 15	14¾ x 13⅞ x 23¼	9
89496-752	48	—	4	3"	8 x 6 x 8	14¾ x 12¾ x 16¼	5½
89496-754	50	89496-756	8	2"	5¼ x 5¼ x 10⅞	10 x 10 x 17⅞	3
89496-758	50	89496-760	8	2"	4½ x 4½ x 8	9½ x 9½ x 14⅞	2½

\* These specific products are not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.



# ThermoSafe® InsulatedShipper-VIP



Our Vacuum Insulated Panel (VIP) Shippers are the best choice for longer duration shipments of high-value, temperature-sensitive products allowing smaller container sizes and reducing shipping weight of your package. These high performance insulated shippers have a tough, non-metalized barrier and outer structural film—yielding a robust shipping container with thermal performance that far surpasses conventional foam boxes.

- Reduces gel refrigerant/dry ice requirements
- Extends shipping duration
- Environmentally neutral and recyclable—no CFCs or HCFCs

PALLET		CASE		Capacity (ft <sup>3</sup> )	Dimensions L x W x H (in)		Wall Thickness (in)
Model	Qty	Model	Qty		Inner	Outer	
95041-883*	140	95054-968	12	0.25	9 x 8 x 6	10 x 9 x 7	½
89496-762	432	95054-972	36	0.07	6 x 5 x 4	7 x 6 x 5	½

\* These specific products are not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.

## CERTIS® VIP FROZEN SOLUTIONS

Engineered to provide the lowest total cost of ownership. Certis frozen solutions incorporate leading edge technology to achieve optimal performance while minimizing overall weight, size, and complexity.

- -20°C protection for 5 days
- Designed to our real world ISCSilver® ambient temperature profile
- An inner corrugate liner and corepack provides added protection for the VIP panels and enhances the structural integrity of the system

Model	Duration	Temp.	Payload (liters)	Payload ID (in)	Dimensions L x W x H (in)		Dim. Weight (lb)	Physical Weight (lb)
					Inner	Outer		
10841-244	5-Day	≤20°C	5.7	10.75 x 9.25 x 3.50	12.50 x 11.25 x 9.00	15.56 x 14.31 x 13.75	18.4	9.4
10218-606	5-Day	≤20°C	13.9	9.00 x 9.00 x 10.50	14.37 x 14.37 x 13.62	17.63 x 17.63 x 17.50	33.0	35.3
10841-250	5-Day	≤20°C	25.8	15.00 x 10.75 x 9.75	18.00 x 17.00 x 15.50	21.25 x 20.25 x 19.63	50.9	20.0

## DCS VIP SHIPPERS

Patented shipping system provides four layers of protection against heat damage and withstands rough handling during extended shipments. Each model includes 1" wall vacuum insulated panels and ½" wall of custom molded EPS in addition to an outer corrugated shipper and a inner corrugated liner. Extends shipping times and/or distances and permits the use of smaller lighter packaging. Two stock models available.

Model	Capacity (ft <sup>3</sup> )	Dimensions L x W x H in [mm]	
		Inner	Outer
13500-582	0.47	9.25 x 9.25 x 9.50 [234 x 234 x 241]	15.50 x 15.25 x 15.00 [394 X 387 X 381]
13500-498	1.85	19.00 x 13.00 x 13.00 [483 X 330 X 330]	24.00 x 18.00 x 17.87 [610 X 457 X 432]



# GUIDE: SELECTING THE RIGHT REFRIGERANT

Sonoco ThermoSafe® offers a wide selection of refrigerants for use with its insulated containers.

This table is intended to assist you with selecting the best refrigerant for your shipments.



Refrigerant	Temperature	Recommended Use For	Other Considerations
Dry Ice	-78°C (-109°F)	Products which must be kept frozen for extended periods of time	Dry ice is regulated as a hazardous material in air transport and should not be used with products which may be damaged by extreme cold
Eutectic Gel	-23°C (-10°F)	Products which must be kept frozen	To freeze, freezer must go below -23°C Provides longer lasting protection than standard gel packs
Eutectic Gel	-1°C (+30°F)	Products which must be kept cold for long periods of time	Maintains temperature longer than standard gel packs
Standard Gel	0°C (+32°F)	Products which require refrigerated or frozen protection	Most cost-effective alternative to wet ice
MoistureGuard®	0°C (+32°F)	Products which must be protected from condensation damage	Multi-layer exterior minimizes surface condensation
Foam Brick	0°C (+32°F)	Products which require refrigerated or frozen protection	Foam bricks maintain shape when frozen or thawed
Rigid Bottle	0°C (+32°F)	Products which require refrigerated or frozen protection	Rigid bottles offer maximum durability while maintaining package configuration
Advanced Phase Change Materials	-40°C to +37°C	High-value shipments or when challenging ambient conditions are expected	Maintains narrow temperature ranges for extended durations
Flex Packs	Hot or Cold	Therapeutic treatment	Can be used for either cold or warm compress

\* Call for pricing and availability information regarding preconditioning services, custom printing and returnable tote programs.



# PolarPack®

PolarPack refrigerants provide thermal solutions for temperature critical packages during transit. Available in a broad selection of styles and a multitude of sizes, our refrigerants are designed to provide reliable temperature protection for a vast array of products and packages.



## STANDARD

An economical alternative to wet ice, enclosed in durable 100µ [4.1 mil] polyethylene film. PolarPack gel packs provide reliable refrigeration for the safe transport of temperature-sensitive products.



## GEL WRAP

The elongated design allows for a protective wrap around sensitive specimen samples and diagnostic materials in vials and tubes during transport and shipping. Use in combination with an insulated shipper or envelope for additional assurance.



## FLEX PACKS

Cold and warm pack therapy used by physical therapists, hospitals, and physicians to treat areas of pain and inflammation.

Model	Weight (oz)	Dimensions L x W x H (in)
STANDARD		0°C (+32°F)
16000-068	3	3¼ x 4 x 5⁄8
89050-000	6	5½ x 3½ x ¾
89050-002	8	6½ x 3½ x ¾
89024-674	12	6 x 5½ x 1
14100-476	16	6½ x 5½ x 1
14100-478	24	8 x 5½ x 1¼
89049-998	32	10½ x 5½ x 1¼
10770-550	42	9 x 7½ x 1¼
82029-734	48	10½ x 7½ x 1¼

Model	Weight (oz)	Dimensions L x W x H (in)
GEL WRAP		0°C (+32°F)
75845-138	16	16 x 5½ x ½

Model	Weight (oz)	Dimensions L x W x H (in)
FLEX PACKS		0°C (+32°F)
10795-962	3	3¼ x 4 x 1
10795-964	9	6 x 5½ x 1
10795-958	18	6 x 11½ x 1
10795-960	36	12 x 12½ x 1



## RIGID BOTTLES

Multi-purposed and designed to withstand rugged warehouse packing environments. These blow-molded rigid plastic bottles are our most durable refrigerants.



## FOAM BRICKS

Vacuum-sealed for consistent weight and shape. These semi-rigid foam bricks never change shape during freezing, thawing or transit, enabling superior surface contact for more consistent temperature control.



## MOISTUREGUARD®

Minimizes surface condensation, these packs have a multi-layered exterior, protecting product from moisture damage.

Model	Weight (oz)	Dimensions L x W x H (in)
<b>RIGID BOTTLES</b>		<b>0°C (+32°F)</b>
89049-990	8	5½ x 2¾ x 1
89049-952	16	7 x 3½ x 1½
89049-988	32	8 x 5 x 1¾

<b>FOAM BRICKS</b>		<b>0°C (+32°F)</b>
75845-336	5	4½ x 4 x ½
89049-986	7.5	4½ x 4 x ¾
75845-338	9	4½ x 4 x 1
89049-980	15	4½ x 4 x 1½
75845-340	17	9 x 4¾ x ¾
89049-946	18	8¼ x 5½ x ¾
75845-342	20	7 x 5 x 1
75845-344	22	9 x 4¾ x 1
89049-948	23	5 x 5 x 1¾
89049-950	24	6½ x 4½ x 1½
75845-346	26	10¾ x 9¼ x ½
75845-348	27	7¾ x 7¾ x 7/8
75845-350	30	5½ x 8½ x 1½
89079-080	31	9 x 4 x 1½
75845-332	38	10¾ x 9¼ x ¾
10770-548	39	9 x 9 x ¾
89049-982	56	11¼ x 9¼ x 1
75845-334	61	10½ x 7½ x 1¾
89049-984	64	10½ x 6½ x 1¾

<b>MOISTURE GUARD</b>		<b>0°C (+32°F)</b>
89049-996	8	6 x 4¾ x ¾
89049-992	12	6 x 5½ x ¾
89049-940	16	6½ x 5½ x ¾
89049-994	24	8 x 5½ x 1¼
89049-942	32	10½ x 5½ x 1¼
89049-944	48	10½ x 7½ x 1¼

# U-tek®



Superior protection for shipping temperature-sensitive materials. Maintains critical temperatures of serums, test samples, live or frozen tissues, organs, and pharmaceuticals for extended periods. Laminated, metallized film exterior provides radiant heat barrier and resists punctures.

Model	Formula	Weight (oz)	Dimensions L x W x H (in)
15715-134	-1° C (+30° F)	8	6 x 4 x ¾
15715-103	-1° C (+30° F)	12	6¾ x 4 x 1
15715-150	-1° C (+30° F)	16	6½ x 6½ x 7/8
73320-198	-1° C (+30° F)	24	7½ x 6½ x 1
15715-154	-1° C (+30° F)	32	9¾ x 7¾ x 1
15715-130	-1° C (+30° F)	48	10½ x 7¾ x 13/16
15715-137	-23° C (-10° F)	8	6 x 4 x ¾
15715-105	-23° C (-10° F)	12	6¾ x 4 x 1
15715-152	-23° C (-10° F)	16	6½ x 6½ x 7/8
15715-127	-23° C (-10° F)	24	7½ x 6½ x 1
15715-156	-23° C (-10° F)	32	9¾ x 7¾ x 1
15715-132	-23° C (-10° F)	48	10½ x 7¾ x 13/16

## U-tek®

**-1° C/+30° F-Mat**

**-1° C/+30° F-Single**

Cushions fragile shipments, and won't dilute ice baths or damage samples. Remains frozen longer than regular ice, without the melting mess.

- May be refrozen and reused, withstands pressures in excess of 60 lb per square inch for five minutes or longer
- Refrigerant contains neutral pH distilled and deionized water, and proprietary materials certified by the U.S. Food and Drug Administration as food grade chemicals



35751-305



89496-676



35751-308

Model	Style	Description	Dimensions	Case Weight (lb)
35751-305	Mat	1 roll	16" W x 34 ft L	50
89496-676	Square Mat	28 sheets	16" W x 14¾" L	50
35751-308	Singles	Approximately 1500 packets	1½" W x 3" L	50



## INNOVATIVE PHASE CHANGE MATERIAL

PureTemp® Phase Change Materials liquefy or solidify at precise temperatures. When the surrounding temperature falls below the phase temperature, they solidify and release their stored energy. If the temperature rises above the phase temperature, they liquefy and absorb excess energy.

These two phenomena protect the product from excessive heat and cold to help maintain product temperature for extended periods of time. PureTemp is engineered to react to a precise temperature, from -40° to +37°C, and to operate in a very narrow temperature range. It is also renewable and biodegradable.

PureTemp comes in foam bricks and hard bottles.

### SUSTAINABILITY

- Biodegradable
- USDA BioPreferred® designation

### TIGHTER TEMPERATURE CONTROL

- Extensive range of temperature options
- Constant temperature during freezing or melting provides consistent temperature control
- Eliminates thermal shock with fewer excursions

### TOTAL COST CONTROL

- Increases payload efficiency
- Reduces shipping weight and freight costs  
Less PureTemp material is required for temperature control when compared to water-based refrigerants
- Simplifies packout inventory and process
- Decreases box size for less warehouse and packout space
- Eliminates bench-time
- Increases shipping duration

PureTemp® is a trademark of Entropy Solutions, Inc. Used with permission.

	Model	Phase Temp	Weight (oz)	Dimensions L x W x H (in)
Rigid Bottles	10841-252	-21° C	29.3	8 x 8 x 1
	10841-254	-21° C	45.2	10 x 10 x 1
	89496-042	1° C	29.2	8 x 8 x 1
	89496-048	1° C	45.2	10 x 10 x 1
	89496-040	4° C	26.2	8 x 8 x 1
	89496-046	4° C	42.8	10 x 10 x 1
	89496-044	23° C	26.2	8 x 8 x 1
	89496-050	23° C	42.8	10 x 10 x 1
Foam Bricks	75875-920	-25° C	55.1	10¾ x 9¾ x 1
	75875-922	-20° C	24.6	6 x 6 x 1½
	89496-034	4° C	11.0	9 x 4¾ x ½
	75875-924	4° C	21.6	9 x 4¾ x 1
	89496-036	4° C	25.5	10¾ x 9¾ x ½
	75875-926	4° C	37.8	10¾ x 9¾ x ¾
	75875-928	4° C	50.1	10¾ x 9¾ x 1
	89496-038	20° C	25.5	10¾ x 9¾ x ½
	10770-552	20° C	35.7	10¾ x 9¾ x ¾
	10770-554	20° C	47.4	10¾ x 9¾ x 1

# READY-ENGINEERED INSULATED SHIPPING SYSTEMS



Quarter PMC and Half PAG pallet shipper

	Envoy®	Certis®	ChillTech® / Greenbox®
Benefit Summary	<p><b>EFFICIENT, SEASONAL PROTECTION</b></p> <ul style="list-style-type: none"> <li>Numerous configurations available to meet a variety of needs</li> <li>Molded containers utilize natural convection to reduce weight and overall shipper size</li> <li>FEWER components, FASTER assembly, INCREASED operational efficiencies</li> </ul>	<p><b>ROBUST, UNIVERSAL PROTECTION</b></p> <ul style="list-style-type: none"> <li>Optimized to provide the lowest total cost of ownership available</li> <li>Designed using a variety of different ambient temperature profiles representative of moderate to extreme external distribution environments</li> <li>Save on assembly time and space requirements by utilizing our ZERO Bench-Time® technology which allows our solutions to be packed out immediately</li> </ul>	<p><b>REUSABLE/RETURNABLE</b></p> <ul style="list-style-type: none"> <li>Ideal for clinical trial shipments or other high value payloads</li> <li>Utilizes advanced phase change materials, resulting in fewer components and lower weight, and decreasing total cost of ownership</li> <li>ZERO Bench-Time® refrigerant design means no waiting—greatly simplifies and accelerates the assembly process</li> </ul>
Transit Duration	1-2 Days	2-5 Days	2-5 Days
Insulation	EPS	EPS, PUR, or VIP	EPS and/or VIP



# READY-ENGINEERED PRODUCT PORTFOLIO HEAT MAP: PARCELS

			1 DAY	2 DAY	3 DAY	4 DAY	5 DAY		
<b>SMALL</b>	1-3 Liters	RFG	10770-500	89213-022 (Greenbox)	15715-175 (Nomadic) 89213-024 (Greenbox) 75997-154	10218-776	75997-162	75997-062	
		CRT			10218-608 Summer 10218-610 Winter	89213-026 (Greenbox)		89213-028 (Greenbox)	
		FRZ			89213-020 (Greenbox)	75788-514 (Nomadic) 89213-032 (Greenbox)	10218-792		
	4-6 Liters	RFG	10770-574		10218-612 Summer 10218-614 Winter	75817-428	89213-068	89213-040 (Greenbox)	10841-240
		CRT			10218-624 Summer 10218-778 Winter	75817-430		10841-242	89213-044 (Greenbox)
		FRZ	89213-030 (Greenbox)			75817-432	10218-794		10841-244
<b>MEDIUM</b>	7-10 Liters	RFG	89213-034; 89213-030 (Greenbox)	87003-931 (Nomadic) 75959-644	75997-156	89213-070	75997-056	75997-064	
		CRT			10218-780 Summer 10218-782 Winter 75959-640		89213-040 (Greenbox)		
		FRZ			75959-642	10770-544	89213-046 (Greenbox)		
	11-15 Liters	RFG			10218-616 Summer 10218-618 Winter 75959-626	89213-073 75817-434		75997-058	75788-516
		CRT			75959-622	75817-436	10770-540	10770-542	75788-518
		FRZ			75959-624	75817-438	10218-606	10218-796	75788-502
<b>LARGE</b>	16-25 Liters	RFG		10218-620 Summer 10218-622 Winter 75997-158	89213-048 (Greenbox)		89213-074	75997-066	
		CRT		10218-784 Summer 10218-786 Winter			89213-050 (Greenbox)		
		FRZ					10218-798		
	26-50 Liters	RFG		10218-774	75959-632 75997-160	75817-440		75997-060	10841-246 75997-068
		CRT			10218-788 Summer 10218-790 Winter 75959-628	75817-442	10770-546		10841-248
		FRZ			75959-630	75817-444			10841-250
<b>X-LARGE</b>	51+ Liters	RFG		75959-638	75839-368			75839-352	
		CRT		75959-634	75839-370			75839-354	
		FRZ		75959-636	75839-372			75839-356	

RFG	Refrigerated 2-8 °C
CRT	Controlled-Room Temp 15-25 °C
FRZ	Frozen < -20 °C
	ENVOY
	CHILLTECH/ GREENBOX
	CERTIS/ NOMADIC

\* These specific products are not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.

# Nomadic®

## LEGACY PRE-QUALIFIED SHIPPERS FOR 48 HOUR SHIPMENTS



87003-931

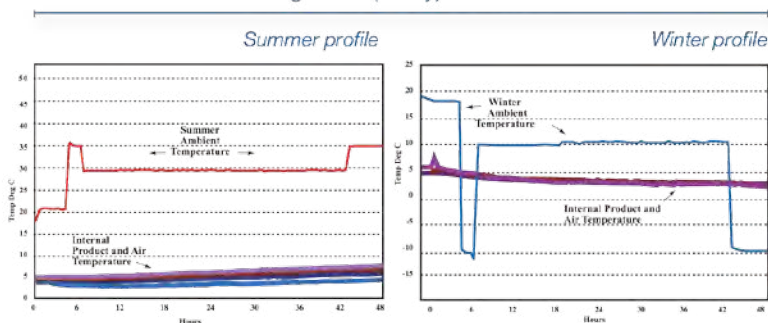
Nomadic® Pre-Qualified Shippers deliver precise protection for refrigerated and frozen pharmaceuticals, biological specimens, and samples in a range of configurations.

- 2°C – 8°C shipping systems have passed comprehensive thermal and transit testing performed by ISC Labs®, the leading testing and validation laboratory in the industry
- Maintains minimum and maximum loads of refrigerated products at 2°C – 8°C for a minimum 48 hours, and below -20°C for a minimum of 72 hours with the use of dry ice pellets
- Durable one-piece closed cell polyurethane foam insulated shipper
- CFC and HCFC-free. Complies with international clean air regulations. Reusable; replaceable components available separately to reduce overall packaging costs

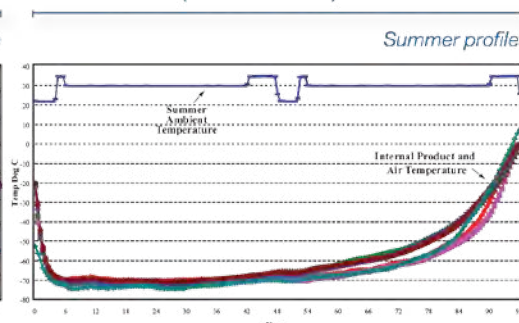
	PALLET		CASE		Payload (liters)	Dimensions L x W x H in [mm]	
	Model	Qty	Model	Qty		Inner	Outer
REFRIGERATED 2-8 °C	15715-175*	18	95054-974*	1	2.3	7.5 x 5 x 3.75 [190 x 127 x 95]	17.88 x 15.25 x 18.13 [454 x 387 x 460]
	87003-931*	12	87003-923*	1	10.5	10 x 8 x 8 [254 x 203 x 203]	20.5 x 18.5 x 23 [521 x 470 x 584]
FROZEN -20 °C	75788-514	18	---	1	2.3	7.5 x 5 x 3.75 [190 x 127 x 95]	17.88 x 15.25 x 18.13 [454 x 387 x 460]
	10770-544	12	---	1	10.5	10 x 8 x 8 [254 x 203 x 203]	20.5 x 18.5 x 23 [521 x 470 x 584]

\* Refrigerants included

Refrigerated (2 Day) test results



Frozen (Less than -20°) test results



# Envoy®

## EFFICIENT, SEASONAL SOLUTIONS

Numerous configurations available to meet a variety of needs

The ThermoSafe Envoy series features a vast selection of temperature ranges for 2-day shipments of temperature sensitive products. Utilizing standardized materials with the lowest packaging cost available, these efficient and easy-to-assemble shippers are ideal for shipping pharmaceuticals, clinical treatments, and diagnostic samples.



	Model		Payload (liters)	Weight lb [kg]		Dim. Weight lb [kg]	Payload I.D. in [mm]			Shipper O.D. in [mm]		
	Summer	Winter		Summer	Winter		L	W	H	L	W	H
	REFRIGERATED 2-8° C	10218-608	10218-610	2.5	17.4 [7.9]	12.4 [5.6]	25.8 [11.7]	9.01 [229]	7.99 [203]	2.13 [54]	16.7 [425]	15.75 [400]
10218-612		10218-614	6.4	23.4 [10.6]	20.8 [9.4]	33.8 [15.3]	8.86 [225]	7.87 [200]	5.63 [143]	16.7 [425]	15.75 [400]	21.26 [540]
10218-616		10218-618	12.1	36.1 [16.4]	28.9 [13.1]	48.7 [22.1]	11.14 [283]	9.6 [244]	6.89 [175]	20.51 [521]	19.01 [483]	20.75 [527]
10218-620		10218-622	24.1	63.3 [28.7]	43.0 [19.9]	76.1 [34.5]	19.76 [502]	11.26 [286]	6.61 [168]	29.02 [737]	20.51 [521]	21.26 [540]
CRT 15-25° C	10218-624	10218-778	4.5	14.2 [6.4]	10.0 [4.5]	25.8 [11.7]	7.99 [203]	7.01 [178]	4.88 [124]	16.7 [424]	15.75 [400]	16.26 [413]
	10218-780	10218-782	8.1	19.2 [8.7]	14.2 [6.4]	33.8 [15.3]	7.99 [203]	7.01 [178]	8.87 [225]	16.7 [424]	15.75 [400]	21.26 [540]
	10218-784	10218-786	18.2	28.8 [13.1]	19.4 [8.8]	48.7 [22.1]	11.14 [283]	9.61 [244]	10.47 [266]	20.51 [521]	19.01 [483]	20.75 [527]
	10218-788	10218-790	39.6	49.8 [22.6]	32.8 [14.9]	76.1 [34.5]	19.76 [502]	11.26 [286]	10.87 [276]	29.02 [737]	20.51 [521]	21.26 [540]
FROZEN* < -20° C	10218-792		2.5	23.8 [10.8]		25.8 [11.7]	9.01 [229]	7.99 [203]	2.13 [54]	16.7 [424]	15.75 [400]	16.26 [413]
	10218-794		5.6	31.8 [14.4]		33.8 [15.3]	9.01 [229]	7.99 [203]	4.76 [121]	16.7 [424]	15.75 [400]	21.26 [540]
	10218-796		12.1	49.2 [22.3]		48.7 [22.1]	11.14 [283]	9.6 [244]	6.89 [175]	20.51 [521]	19.01 [483]	20.75 [527]
	10218-798		24.1	88.9 [40.3]		76.1 [34.5]	19.76 [502]	11.26 [286]	6.61 [168]	29.02 [737]	20.51 [521]	21.26 [540]

\* Frozen solutions have a minimum duration of 4 days.

## ENVOY DIRECT

Envoy Direct solutions are simple, economic designs providing cost effective temperature control and optimized dimensional weight to reduce transportation costs. Designed to the ISTA 7E profile for 24 hour protection.

	Model	Payload (liters)	Weight lb [kg]	Dim. Weight lb [kg]	Payload I.D. in [mm]			Shipper O.D. in [mm]			Refrigerant Required per Shipper*	Components Included
					L	W	H	L	W	H		
REFRIGERATED	10770-572	3.5	13 [5.9]	13 [5.9]	9.25 [235]	9.25 [235]	2.50 [64]	14.29 [367]	14.29 [363]	11.28 [292]	(2) 10770-550 42oz Gel Packs	EPS Pads Only, No Corrugate
	10770-576	4.9	17 [7.7]	16 [7.3]	10.75 [235]	9.25 [235]	3.00 [76]	15.86 [403]	14.31 [365]	11.50 [292]	(2) 82029-734 48oz Gel Packs	EPS Pads Only, No Corrugate
	10770-500	3.7	16 [7.3]	17 [7.7]	9.00 [226]	9.00 [226]	3.00 [73]	14.88 [387]	15.04 [387]	12.47 [318]	(2) 10770-548 39oz Foam Bricks	Outer Corrugate, Corepack & EPS Pads
	10770-574	5.6	20 [9.1]	19 [8.6]	10.38 [267]	8.88 [229]	3.38 [92]	16.50 [422]	15.15 [384]	13.12 [330]	(2) 89049-982 56oz Foam Bricks	Outer Corrugate, Corepack & EPS Pads

\*Refrigerants sold separately. See pages 11-15.

# CERTIS PLATFORM

## ONE-WAY UNIVERSAL SOLUTIONS



### OPERATIONAL EFFICIENCY REDEFINED

Optimized to provide the lowest total cost of ownership available

Our Certis brand of premium shippers are ideal for one-way shipments of pharmaceutical products across summer or winter seasons utilizing the same pack-out for refrigerated, CRT and frozen solutions from 48 hours to 120 hours of duration. Pre-qualified to ISC Global™ ambient profile.

The Certis Platform of shippers are designed to offer operational efficiency and ease of personnel training using ZERO Bench-Time® technology and same pack-out configuration across durations. These shippers optimize inventory and provide lowest total cost of ownership utilizing only 3 types of bricks and 8 shippers to create 24 shipping solutions across temperature ranges and duration.

		6L	14L	26L	56L
PAYLOAD DIMS	[in]	10.75 x 9.25 x 3.50	9.00 x 9.00 x 10.50	15.00 x 10.75 x 9.75	23.75 x 15.50 x 9.25
	[mm]	273 x 235 x 89	229 x 229 x 267	381 x 273 x 248	603 x 394 x 235
<b>3 DAY SOLUTIONS</b>					
OUTER DIMS	[in]	18.13 x 16.75 x 16.38	19.00 x 19.00 x 18.63	23.88 x 22.63 x 21.18	32.63 x 27.50 x 22.00
	[mm]	456 x 422 x 413	483 x 483 x 473	606 x 575 x 538	829 x 699 x 559
DIM WEIGHT	[lb]	29.7	40.3	69.0	118.9
	[kg]	13.5	18.3	31.1	53.9
	2-8 °C	75817-428	75817-434	75817-440	75839-368
	15-25 °C	75817-430	75817-436	75817-442	75839-370
	<-20 °C	75817-432	75817-438	75817-444	75839-372
<b>5 DAY SOLUTIONS</b>					
OUTER DIMS	[in]	15.56 x 14.31 x 13.75	17.63 x 17.63 x 17.56	21.25 x 20.25 x 19.63	30.25 x 25.13 x 20.13
	[mm]	395 x 363 x 349	448 x 448 x 446	540 x 514 x 498	768 x 638 x 511
DIM WEIGHT	[lb]	18.4	32.9	50.9	92.2
	[kg]	8.3	14.9	23.1	41.8
	2-8 °C	10841-240	89213-100	10841-246	75839-352
	15-25 °C	10841-242	10770-540	10841-248	75839-354
	<-20 °C	10841-244	10218-606	10841-250	75839-356



## ROBUST, UNIVERSAL SOLUTIONS

Optimized to provide the lowest total cost of ownership available

- Pre-Qualified—Choice of two different ambient profiles: ISCGold® and ISCSilver®
- Material Neutral Approach—utilizing leading edge technologies to provide the lowest total cost of ownership. Designed solutions reduce the amount of weight, packout complexity, and overall size, resulting in reduced shipping costs.
- Designs feature PureTemp® Vegetable-Based Phase Change Material—natural phase change materials provide strict temperature control and greater efficiency, resulting in packages that are smaller and lighter.

	Model	Payload (liters)	Duration	Weight lb [kg]	Dim. Weight lb [kg]	Insulation	Payload I.D. in [mm]			Shipper O.D. in [mm]		
							L	W	H	L	W	H
<b>Certis Gold: ISCGold® Ambient Temperature Profile</b>												
REFRIGERATED 2-8 °C	89213-069	4.8	3 DAY	40.0 [18]	52.0 [23]	PUR	8.5 [216]	6.3 [159]	5.5 [140]	21.3 [540]	21.3 [540]	19.0 [483]
	89213-071	7.7	3 DAY	50.0 [23]	66.0 [30]	PUR	10.5 [267]	9.0 [229]	5.0 [127]	23.8 [603]	23.8 [603]	19.5 [495]
	89213-073*	12.4	3 DAY	55.0 [25]	82.0 [37]	PUR	10.5 [267]	9.0 [229]	8.0 [203]	27.8 [705]	23.0 [584]	21.3 [540]
	89213-075	19.6	5 DAY	80.0 [36]	59.0 [27]	VIP	14.5 [369]	8.3 [210]	10.0 [254]	24.8 [629]	18.8 [476]	21.0 [533]
<b>Certis Silver: ISCSilver® Ambient Temperature Profile</b>												
REFRIGERATED 2-8 °C	10218-774	30.0	2 DAY	49.7 [23]	65.8 [30]	PUR	16.6 [422]	11.8 [298]	9.5 [241]	24.1 [613]	22.5 [572]	20.1 [511]
	10218-776	3.2	3 DAY	14.4 [7]	9.1 [4]	VIP	7.6 [192]	7.2 [183]	3.6 [92]	12.8 [324]	10.8 [273]	11.0 [279]
	89213-100	14.7	3 DAY	36.0 [16]	56.5 [26]	EPS	9.3 [235]	9.3 [235]	10.5 [267]	21.3 [540]	21.3 [540]	20.8 [527]
	75788-516	13.9	5 DAY	35.3 [16]	32.9 [14.9]	VIP	9.0 [229]	9.0 [229]	10.5 [267]	17.6 [448]	17.6 [448]	17.6 [446]
CRT 15-25 °C	10770-546†	35.0	3 DAY	90.0 [40]	100.2 [45]	PUR	20.3 [514]	11.3 [286]	9.4 [238]	33.0 [838]	24.0 [610]	21.0 [533]
	10770-542†	11.0	4 DAY	42.0 [19]	56.5 [26]	EPS	8.5 [216]	8.5 [216]	10.0 [254]	21.3 [540]	21.3 [540]	20.8 [527]
FRZ <-20 °C	10218-606	14.7	3 DAY	36.0 [16]	56.5 [26]	EPS	9.3 [235]	9.3 [235]	10.5 [267]	21.3 [540]	21.3 [540]	20.8 [527]
<b>Certis Platform: ISC Regional™ Ambient Temperature Profile</b>												
REFRIGERATED 2-8 °C	75959-644*	7.0	2 DAY	19.3 [8.8]	26.7 [12.1]	EPS	9.5 [241]	9.5 [241]	4.5 [114]	18.9 [480]	16.9 [429]	13.9 [352]
	75959-626*	13.0	2 DAY	26.4 [12.0]	38.1 [17.3]	EPS	11.0 [279]	9.5 [241]	7.5 [191]	19.5 [483]	18.5 [483]	17.5 [473]
	75959-632*	27.0	2 DAY	46.9 [21.3]	57.5 [26.1]	EPS	19.1 [486]	11.0 [279]	7.8 [197]	26.9 [683]	20.7 [526]	17.1 [435]
	75959-638*	56.0	2 DAY	72.1 [32.7]	91.5 [41.5]	EPS	20.5 [521]	15.1 [384]	11.0 [279]	28.4 [722]	25.4 [646]	21.0 [533]
CRT 15-25 °C	75959-640*	7.0	2 DAY	17.1 [7.0]	26.7 [12.1]	EPS	9.5 [241]	9.5 [241]	4.5 [114]	18.9 [480]	16.9 [429]	13.9 [352]
	75959-622*	13.0	2 DAY	24.2 [11.0]	38.1 [17.3]	EPS	11.0 [279]	9.5 [241]	7.5 [191]	19.5 [483]	18.5 [483]	17.5 [473]
	75959-628*	27.0	2 DAY	44.4 [21.0]	57.5 [26.1]	EPS	19.1 [486]	11.0 [279]	7.8 [197]	26.9 [683]	20.7 [526]	17.1 [435]
	75959-634*	56.0	2 DAY	67.4 [30.6]	91.5 [41.5]	EPS	20.5 [521]	15.1 [384]	11.0 [279]	28.4 [722]	25.4 [646]	21.0 [533]
FRZ -20 °C	75959-642*	7.0	2 DAY	30.9 [14.1]	26.7 [12.1]	EPS	9.5 [241]	9.5 [241]	4.5 [114]	18.9 [480]	16.9 [429]	13.9 [352]
	75959-624*	13.0	2 DAY	42.4 [19.2]	38.1 [17.3]	EPS	11.0 [279]	9.5 [241]	7.5 [191]	19.5 [483]	18.5 [483]	17.5 [473]
	75959-630*	27.0	2 DAY	66.2 [30.0]	57.5 [26.1]	EPS	19.1 [486]	11.0 [279]	7.8 [197]	26.9 [683]	20.7 [526]	17.1 [435]
	75959-636*	56.0	2 DAY	111.3 [50.5]	91.5 [41.5]	EPS	20.5 [521]	15.1 [384]	11.0 [279]	28.4 [722]	25.4 [646]	21.0 [533]

\* These specific products are not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.

† Contact your VWR Sales Representative for availability.

# ChillTech®

## REUSABLE, AFFORDABLE AND UNIVERSAL



ChillTech is our fully qualified range of 2-8°C reusable shipping systems providing temperature control from 48 hour to 144 hours for payloads ranging from 5L to 40L. Focused on optimizing inventory costs and ease of personnel training, ChillTech shippers utilizes the same pack-out configuration across seasons, durations and payloads while increasing operational efficiency using our patented ZERO Bench-Time® technology option.

- Fully qualified to ISTA 7D and 7E temperature profiles
- Provide ease of personnel training by utilizing the same pack-out configuration across all seasons, payloads and durations. Simply change the outer insulated shipper to switch shipment duration from 48 hours to 72 hours to 144 hours.
- Prolong the duration of the system by keeping them in qualified refrigerators during transit as the PCM will hibernate and re-activate once shipped out
- Reduce inventory costs by using common PCM bottles across payloads and durations
- Save on assembly time and space requirements by utilizing our patented ZERO Bench-Time® technology option which allows our solutions to be packed out immediately after the PCM bottles are removed from the freezer

	Model	Payload (liters)	Duration	Weight lb [kg]	Insulation	Payload I.D. in [mm]			Shipper O.D. in [mm]		
						L	w	H	L	W	H
Regional	<b>75997-154</b>	5.4	2-3 days	14.1 [6.4]	EPS	8.78 [223]	8.78 [223]	4.25 [108]	15.67 [398]	15.59 [396]	11.73 [298]
	<b>75997-156</b>	10.3	2-3 days	19.2 [8.7]	EPS	8.78 [223]	8.78 [223]	8.19 [208]	15.67 [398]	15.59 [396]	15.67 [398]
	<b>75997-158</b>	19.6	2-3 days	30.2 [13.7]	EPS	16.65 [423]	8.78 [223]	8.19 [208]	23.58 [599]	15.59 [396]	15.67 [398]
	<b>75997-160</b>	38.5	2-3 days	44.3 [20.1]	EPS	16.65 [423]	8.78 [223]	16.06 [408]	23.58 [599]	15.59 [396]	23.54 [598]
Compact	<b>75997-162</b>	5.4	3-5 days	16.5 [7.5]	VIP	8.78 [223]	8.78 [223]	4.25 [108]	13.78 [350]	13.43 [341]	9.76 [248]
	<b>75997-056</b>	10.3	3-5 days	22.0 [10.0]	VIP	8.78 [223]	8.78 [223]	8.19 [208]	13.78 [350]	13.43 [341]	13.70 [348]
	<b>75997-058</b>	19.6	3-5 days	33.5 [15.2]	VIP	16.65 [423]	8.78 [223]	8.19 [208]	21.42 [544]	13.66 [347]	13.70 [348]
	<b>75997-060</b>	38.5	3-5 days	50.5 [22.9]	VIP	16.65 [423]	8.78 [223]	16.06 [408]	21.42 [544]	13.66 [347]	21.57 [548]
Global	<b>75997-062</b>	5.4	4-6 days	17.6 [8.0]	EPS/ VIP	8.78 [223]	8.78 [223]	4.25 [108]	15.67 [398]	15.59 [396]	11.73 [298]
	<b>75997-064</b>	10.3	4-6 days	23.4 [10.0]	EPS/ VIP	8.78 [223]	8.78 [223]	8.19 [208]	15.67 [398]	15.59 [396]	15.67 [398]
	<b>75997-066</b>	19.6	4-6 days	35.9 [15.2]	EPS/ VIP	16.65 [423]	8.78 [223]	8.19 [208]	23.62 [599]	15.59 [396]	15.67 [398]
	<b>75997-068</b>	38.5	4-6 days	52.5 [22.9]	EPS/ VIP	16.65 [423]	8.78 [223]	16.06 [408]	23.58 [599]	15.59 [396]	23.54 [598]

# Greenbox®

## ROBUST REUSABLE SOLUTIONS

Greenbox® Reusable Insulated Shippers have been designed to utilize simple packaging configurations, reduce operational complexity, and optimize total cost of ownership. GreenBox's simple design and modular format increases reclamation and refurbishment efficiencies. Ensure the efficacy of your valuable temperature-sensitive products and maintain regulatory compliance throughout distribution with Greenbox.



- ZERO Bench-Time® refrigerant design means no waiting, greatly simplifies and accelerates the assembly process
- Utilizes VIP insulation and PureTemp® PCMs resulting in fewer components and lower weight, decreasing total cost of ownership

	Model	Payload (liters)	Duration	Weight (lb)	Payload I.D. in [mm]			Shipper O.D. in [mm]		
					L	W	H	L	W	H
REFRIGERATED 2 - 8 °C	<b>89213-048</b>	20.0	3 Day	5.8	17.3 [439]	9.3 [236]	7.1 [180]	24.0 [610]	14.0 [356]	12.0 [305]
	<b>89213-022</b>	3.1	1 Day	7.9	7.1 [180]	7.5 [191]	3.6 [91]	9.0 [228]	9.0 [228]	9.0 [228]
	<b>89213-024</b>	1.4	2 Day	10.6	7.1 [180]	7.5 [191]	1.6 [41]	9.0 [228]	9.0 [228]	9.0 [228]
	<b>89213-034</b>	8.3	1 Day	17.0	9.6 [244]	9.6 [244]	5.5 [140]	12.0 [305]	12.0 [305]	12.0 [305]
	<b>89213-036</b>	5.1	2 Day	22.5	9.2 [234]	9.5 [241]	3.6 [91]	12.0 [305]	12.0 [305]	12.0 [305]
	<b>89213-038</b>	5.2	3 Day	22.5	9.6 [244]	9.6 [244]	3.6 [91]	12.0 [305]	12.0 [305]	12.0 [305]
CRT 15 - 30 °C	<b>89213-026</b>	3.1	3 Day	7.9	7.1 [180]	7.5 [191]	3.6 [91]	9.0 [228]	9.0 [228]	9.0 [228]
	<b>89213-028</b>	1.4	5 Day	10.6	7.1 [180]	7.5 [191]	1.6 [41]	9.0 [228]	9.0 [228]	9.0 [228]
	<b>89213-042</b>	8.3	4 Day	17.0	9.6 [244]	9.6 [244]	5.5 [140]	12.0 [305]	12.0 [305]	12.0 [305]
	<b>89213-044</b>	5.2	5 Day	22.5	9.2 [234]	9.6 [244]	3.6 [91]	12.0 [305]	12.0 [305]	12.0 [305]
	<b>89213-050</b>	20.0	6 Day	45.8	17.3 [439]	9.3 [236]	7.1 [180]	24.0 [610]	14.0 [356]	12.0 [305]
FROZEN < -15 °C	<b>89213-020</b>	1.4	2 Day	10.6	7.1 [180]	7.5 [191]	1.6 [41]	9.0 [228]	9.0 [228]	9.0 [228]
	<b>89213-030</b>	5.2	1 Day	22.5	9.2 [234]	9.6 [244]	3.6 [91]	12.0 [305]	12.0 [305]	12.0 [305]
	<b>89213-032</b>	2.3	3 Day	28.0	9.6 [244]	9.6 [244]	1.6 [41]	12.0 [305]	12.0 [305]	12.0 [305]
	<b>89213-046</b>	8.9	4 Day	69.0	13.5 [343]	5.3 [135]	7.1 [180]	24.0 [610]	14.0 [356]	12.0 [305]



# PALLET SOLUTIONS

## PALLET SHIPPER 89496-014

The ThermoSafe® 89496-014 with EasyLoc™ Design is the next generation insulated pallet shipper and features the easiest assembly in the industry. It is specifically designed for life science customers to use in the transport of high-value, temperature-sensitive pharmaceutical, biological, and vaccine products.



## PALLET SHIPPER 89496-012

Model 89496-012 is a pallet sized insulated packaging system with unsurpassed durability for shipping and protecting bulk loads of refrigerated and frozen products.

- Rugged corrugated outer casing: 3" rigid polyurethane insulation
- Reusable 6-piece design assembles in minutes and folds flat when empty for storage or return.
- Optional components include triple-wall pads, spacers, flexible polyurethane foam plug (for less than full loads), and custom pallets

Model	Vol. (ft <sup>3</sup> )	Dimensions L x W x H in [mm]		Empty Weight (lb)
		Inner	Outer	
<b>89496-010</b>	15	32 x 24 x 34 [813 x 610 x 864]	39½ x 31¾ x 45¾ [1003 x 806 x 1162]	64
<b>89496-012</b>	27	39 x 32¼ x 37 [991 x 819 x 940]	46¾ x 39⅝ x 44 [1178 x 1006 x 1118]	77
<b>89496-014</b>	41	41¼ x 33⅜ x 50⅜ [1048 x 848 x 1280]	49¼ x 40⅞ x 56⅜ [1251 x 1019 x 1432]	92
<b>89496-016</b>	61	50 x 46 x 46 [1270 x 1168 x 1168]	57¾ x 53¾ x 53 [1467 x 1365 x 1346]	151

*Each shipper should be used with a pallet (not included).*

## PRE-QUALIFIED SOLUTIONS

**More temperature options. Fewer packing components. Easy assembly.** Designed to meet the unique transport requirements of pharmaceuticals, biologics, vaccines, and other high-value life science products.

Featuring:

- Pre-qualified for refrigerated, frozen, and CRT temperatures
- Dimensions have been optimized for narrow-body aircraft, wide-body aircraft, and North American trucks

Pallet Shell	Temp.	Duration (hrs)	Packout	Payload Dimensions L x W x H in. [mm.]	Required Refrigerant Sleeves
<b>10795-966</b>	< -20° C	48	Universal	33 x 24½ x 36½ [838 x 622 x 927]	(1 each) <b>10795-952</b>
<b>10795-966</b>	< -15° C	120	Universal	33 x 24½ x 36½ [838 x 622 x 927]	(1 each) <b>10795-952</b>
<b>10795-966</b>	2-8° C	96	Universal	33 x 24½ x 36½ [838 x 622 x 927]	(1 each) <b>10795-968</b> , (1 each) <b>10795-970</b>
<b>10841-264</b>	2-8° C	96	Summer	32 x 30 x 22 [813 x 762 x 559]	Refrigerants Included
<b>10841-266</b>	2-8° C	120	Winter	32 x 20 x 28 [813 x 762 x 711]	Refrigerants Included
<b>10841-256*</b>	2-8° C	120	Summer	33 x 30 x 7.25 [838 x 762 x 184]	Refrigerants Included
<b>10841-258*</b>	2-8° C	120	Winter	35 x 30 x 9 [889 x 762 x 229]	Refrigerants Included
<b>10795-966</b>	1-10° C	144	Universal	33 x 24½ x 36½ [838 x 622 x 927]	(1 each) <b>10795-968</b> , (1 each) <b>10795-970</b>
<b>10795-966</b>	15-25° C	72	Universal	33 x 24½ x 36½ [838 x 622 x 927]	<b>10795-972</b>
<b>10795-966</b>	10-30° C	120	Universal	33 x 24½ x 36½ [838 x 622 x 927]	<b>10795-972</b>
<b>10841-260</b>	2-8° C	120	Summer	48 X 40 X 35 [1219 X 1016 X 889]	Refrigerants Included
<b>10841-262</b>	2-8° C	120	Winter	48 X 40 X 38 [1219 X 1016 X 965]	Refrigerants Included

\* Minimum order quantity 2

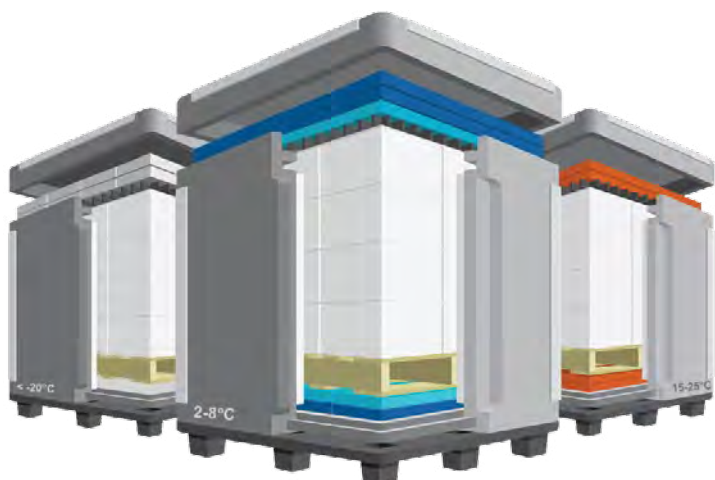


# LD7 PALLET SHIPPERS

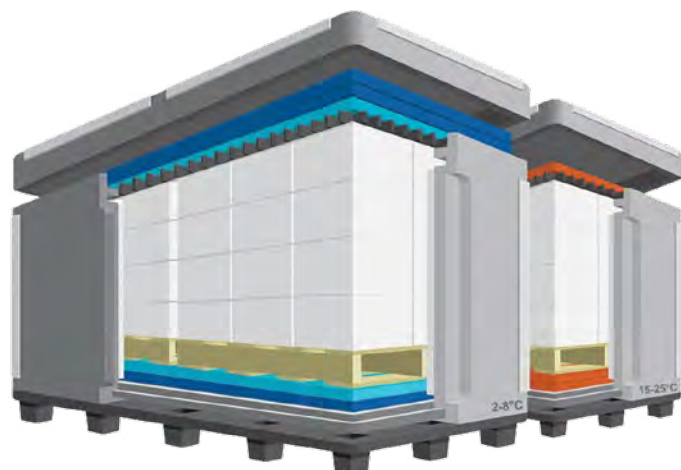
## TECHNOLOGY, PERFORMANCE, SIMPLICITY

The new LD7 pallet shipper platform maximizes the space on an LD7 air pallet used in wide-body aircraft. The platform includes solutions for 2-8°C, 15-25°C and frozen temperature ranges. Each solution has a universal pack-out design to be used in both hot and cold seasons while also accommodating the demands of cross-hemispheric shipments.

- Optimize air shipments of temperature-sensitive biologics and pharmaceutical products for durations exceeding five days
- Platform features patent-pending technologies such as our unique interlocking L-shaped panels; revolutionary design eliminates corner leaks and drastically reduces edge leaks
- ConvecTECH™ dispersion panels maximize natural convection to eliminate side refrigerants, increasing payload and simplifying packing procedures



Quarter PMC Pallet Shippers



Half PAG Pallet Shippers

Pallet Shell	Temp.	Duration (hrs)	Tare Weight lb [kg]	Payload (liters)	Payload Dimensions L x W x H in [mm]	Outer Dimensions L x W x H in [mm]	Required Components
75833-300	2-8° C	120	514 [233]	1,154	50 x 36 x 39.13 [1270 x 914 x 994]	61.6 x 47.1 x 62.6 [1565 x 1196 x 1590]	(10 each) 75833-296 (15 each) 75833-294
75833-300	15-25° C	120	444 [201]	1,154	50 x 36 x 39.13 [1270 x 914 x 994]	61.6 x 47.1 x 62.6 [1565 x 1196 x 1590]	(20 each) 75833-304
75833-300	<math><-20^{\circ}\text{C}</math>	120	540 [245]	1,243	50 x 36 x 42.13 [1270 x 914 x 1070]	61.6 x 47.1 x 62.6 [1565 x 1196 x 1590]	(1 each) 75833-298

\* Contact your VWR Sales Representative for availability.



# ThermoSafe®

## Storage/Transport Chests

ThermoSafe Storage and Chests provide mobile, non-electrical low temperature maintenance for a wide variety of laboratory and field applications. Ideal for demanding cryogenic and laboratory testing, as well as, the transport and storage of temperature-sensitive specimens. Models available with rugged polythene interior and exterior casings and lightweight laminated fiberboard and EPS foam interiors.

Model	Vol. (ft <sup>3</sup> )	Dry Ice Capacity~ (lb)	Avg Holding Time+ (days)	Wall Thickness (in)	Dimensions L x W x H (in)		Empty Weight (lb)	Hardware & Handling Accessories
					Inner	Outer		
Polyethylene casing with urethane foam insulation R-value: 6.2 per in [1.1 Km <sup>2</sup> /W]								
35742-104	0.7	50	7	1¾	1 <sup>15</sup> / <sub>16</sub> x 10 <sup>5</sup> / <sub>8</sub> x 10 <sup>1</sup> / <sub>4</sub>	15 x 14 <sup>1</sup> / <sub>16</sub> x 13½	12	Optional carrying strap
89496-028	0.7	50	7	1¾	1 <sup>15</sup> / <sub>16</sub> x 10 <sup>5</sup> / <sub>8</sub> x 10 <sup>1</sup> / <sub>4</sub>	15 x 14 <sup>1</sup> / <sub>16</sub> x 13½	12	Lid hinge w/ 2 latches; carrying handle
16191-311	1.0	80	10	2¼	16 <sup>11</sup> / <sub>16</sub> x 10 <sup>1</sup> / <sub>4</sub> x 10½	2 <sup>15</sup> / <sub>16</sub> x 14 <sup>7</sup> / <sub>8</sub> x 13 <sup>5</sup> / <sub>8</sub>	16	Lid hinge w/ stay & 2 latches; carrying handle
35742-417	1.5	85	6	2	15 <sup>1</sup> / <sub>8</sub> x 13 <sup>3</sup> / <sub>4</sub> x 12 <sup>5</sup> / <sub>8</sub>	19 <sup>7</sup> / <sub>8</sub> x 18 <sup>5</sup> / <sub>8</sub> x 16 <sup>5</sup> / <sub>8</sub>	27	Lid hinge with stay; 2 latches; 2 spring loaded handles
73320-006*	2.7	150	7	2¼	17 x 16½ x 16 <sup>3</sup> / <sub>8</sub>	23 <sup>3</sup> / <sub>8</sub> x 22 <sup>1</sup> / <sub>8</sub> x 21¼	34	Lid hinge with stay & 2 latches; opt. dolly
35742-101*	2.7	150	7	2¼	17 x 16½ x 16 <sup>3</sup> / <sub>8</sub>	23 <sup>3</sup> / <sub>8</sub> x 22 <sup>1</sup> / <sub>8</sub> x 21¼	35	Lid hinge with stay; 2 latches; 2 spring loaded handles
35742-100*	3.75	200	12	2	22 <sup>13</sup> / <sub>16</sub> x 13½ x 21	28 <sup>1</sup> / <sub>8</sub> x 19 <sup>1</sup> / <sub>8</sub> x 25¼	39	Lid hinge with stay & 2 latches
89496-030*	3.75	200	12	2	22 <sup>13</sup> / <sub>16</sub> x 13½ x 21	28 <sup>1</sup> / <sub>8</sub> x 19 <sup>1</sup> / <sub>8</sub> x 25¼	40	Lid hinge with stay; 2 latches; 2 spring loaded handles; opt. dolly
Laminated fiberboard with EPS insulation R-value: 4.2 in [0.74 Km <sup>2</sup> /W]								
15713531	0.44	24	1.9	1½	10½ x 7¼ x 10	13¾ x 10½ x 13½	3	Optional Carrying strap available
15713506	0.60	33	2.6	1½	11¾ x 10 x 8 <sup>5</sup> / <sub>8</sub>	15 <sup>1</sup> / <sub>8</sub> x 13 <sup>5</sup> / <sub>8</sub> x 12 <sup>1</sup> / <sub>8</sub>	4	Optional Carrying strap available
35742-009	1.0	54	5.5	2	12 x 12 x 11½	16 x 16 x 15½	7	Included: Carrying strap [no handles]
16191-313	1.5	81	6.5	1½	19 <sup>3</sup> / <sub>8</sub> x 12 <sup>3</sup> / <sub>8</sub> x 12 <sup>15</sup> / <sub>16</sub>	22 ½ x 15 ¾ x 15 ¾	6	Included: Carrying harness, [no handles]
73320-014	1.6	87	7	1½	17 x 9 7/8 x 16½	20 3/8 x 13¼ x 19½	6	Included: Carrying harness with handles
73320-018	2.0	120	11	2	17 x 16½ x 12 <sup>5</sup> / <sub>8</sub>	21 x 21 x 16 <sup>3</sup> / <sub>8</sub>	8	N/A
35742-031*	2.5	130	11.5	2	16¾ x 16¾ x 15¾	21 x 21 x 19¾	9	N/A
35742-064*	4.3	2½ <sup>270</sup>	23 <sup>18</sup>	2	23 <sup>1</sup> / <sub>8</sub> x 14 <sup>1</sup> / <sub>8</sub> x 23	27 <sup>7</sup> / <sub>8</sub> x 19 x 28	14.5	N/A

~ Weight calculated using pelletized dry ice + Average time before full sublimation

\* Optional dolly available



## BLOOD BANKING SOLUTIONS

Insulated expanded polypropylene medical transporters are ideal for on-site collection, storage and transport of temperature-sensitive specimens, medications, medical devices, and organs.

### VIA® BLOOD TRANSPORTER 10809-156

Simple, reusable ergonomic design utilizes leading edge technology to provide ultimate temperature protection.

- Ideal for the temporary storage of blood and blood products in the operating room and the transport of medications, medical devices, specimens and organs
- ZERO Bench-Time® refrigerant technology reduces assembly process for time and temperature critical materials—additional refrigerant kits are available, **75800-452**
- Pre-qualified to maintain packed red blood cells at 1-6°C and 1-10°C
- See table on page 28 for details
- **Storage:**  
1-6°C: 8 hours
- **Transport:**  
1-10°C: Min. of 12 hours



*Dolly sold separately*  
**95041-878**

### MEDICAL TRANSPORTER 89050-562

- Qualified by ISC Labs® for temporary storage and transport of both platelet (20°C-24°C for up to 8 hours) and non-platelet production whole blood (1°C-10°C for up to 24 hours) with crushed wet ice
- Includes operating instructions and test data for cooling platelet and non-platelet production blood
- Side loading clear plastic document holder
- Durable nylon clad transporter with expanded polypropylene container that is stain and impact resistant
- Qualification report included
- See table on page 28 for details



*Dolly sold separately*  
**95041-878**

### PLATELET SHIPPER 89347-994\*

Shown (right) packed with platelets. This shipper has been pre-qualified for room temperature shipments of blood platelets (20°C-24°C for up to 24 hours). Qualification report is included with product.

*\* These specific products are not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.*



# ThermoSafe®

## Medical Transporter

ThermoSafe Medical Transporters are ideal for short-term storage, carrying and delivering of temperature-sensitive tissues, serums, vaccines, cultures, specimens, and other temperature-sensitive materials.

- Washable, weather-resistant blue nylon shell printed with standard biohazard symbol, with polyethylene foam insulation
- Durable, reusable, and ideal for field samples
- Zipper lock closure

### Model 15713-614

Inner partition divides unit and separates specimens. Features built-in lid compartments for U-tek® refrigerant packs. Lightweight, easy to carry and transport. Model 15713-614 includes a vial foam insert that holds (24) 5 to 15 ml vials and one Model 15715-103 U-tek 12 oz [340 g].

### Models 89049-956 and 89049-958

Includes removable, rigid thermoformed tray— ideal for washing and reusing; prevents leaking inside and out of transport unit; reinforces durability.

Model	Volume (ft <sup>3</sup> )	Blood Unit Capacity (with Refrigerant)	Wall Thickness (in)	Dimensions L x W x H (in)		Empty Weight (lb)	Replacement Bottles
				Inside	Outside		
89049-956	0.30	N/A	¼	8½ x 6½ x 9¾	9 x 7 x 10	1	
15713-614	0.76	N/A	¾	13½ x 9¾ x 10	14 x 10¼ x 10½	2	
89049-958	0.47	N/A	¾	11⅝ x 8⅝ x 9⅝	14¾ x 9¾ x 10¾	2	75800-452
10809-156	2.15	3-7	2	13¾ x 14½ x 10	17¾ x 14½ x 14%	16.3 w/ basket and refrigerants	
89050-562	2.22	16	1	15¾ x 10¾ x 22¾	17¾ x 12¾ x 24¾	12.2 w/baskets	



## THERMOSAFE NYLON CARRIERS

Rugged, lightweight totes ideal for transport of diagnostic and clinical specimens. Washable, weather-resistant nylon shell with thick-walled polystyrene foam insulation. Adjustable nylon carrying straps, for hand or shoulder carrying. Four models with capacities from 27 to 45 liters [0.96 to 1.6 cubic feet].



Model	Volume (ft <sup>3</sup> )	Wall Thickness (in)	Dimensions LxWxH (in)		Closure	Empty Weight (lb)	Interior	Exterior Color
			Inside	Outside				
10054-102*	0.96	2	12 x 12 x 11½	16 x 16 x 15½	Bayonet-style clip	3.5	Nylon	Red
10054-106*	1.0	1½	17½ x 10⅞ x 10⅞	20¼ x 13¼ x 13¼	Velcro®	3.0	Nylon	Blue
10053-848*	1.6	1½	17 x 9⅞ x 16½	20⅞ x 13¼ x 19½	Bayonet-style clip	4.5	Nylon	Red
10054-110*	1.6	1½	17 x 9⅞ x 16½	20⅞ x 13¼ x 19½	Bayonet-style clip	4.5	Nylon	Black
10054-112*	1.6	1½	17 x 9⅞ x 16½	20⅞ x 13¼ x 19½	Bayonet-style clip	4.5	Nylon	Blue

\* These specific products are not available in Canada. Please contact your VWR Sales Representative to learn about easy access to similar options available in your region.



## DURABLE INSULATED CONTAINERS

### DRY ICE STORAGE, SPECIMEN TRANSPORT

ThermoSafe Durable Insulated Containers maintain critical temperatures for your laboratory specific materials. These rugged containers are the most popular design for the transport and storage of dry ice and temperature-sensitive specimens. Our insulated containers are uniquely compact and designed to maneuver in tight spaces. Double-wall polyethylene construction filled with urethane foam insulation maintains dry ice quality.

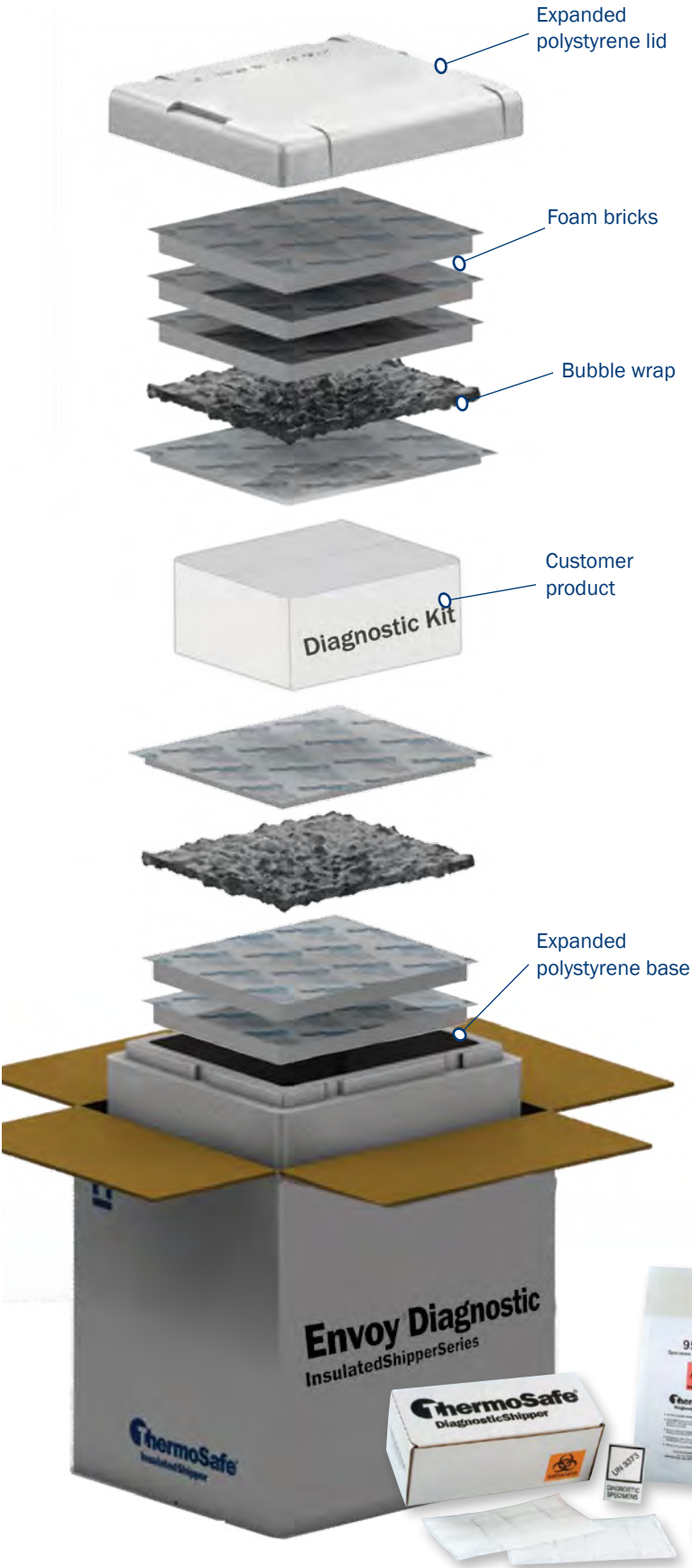
Ranging in size and style, these Durable Insulated Containers make storing, transporting, and unloading efficient and worry-free. High impact polyethylene can handle the rigors of transport, and the tight fitting lid and container construction maintains temperature and maximizes transporting efficiency.



ThermoSafe chests and containers are strong, durable, and specifically manufactured to be used and reused. Replacement latches, hinges, handles, and other handling and replacement accessories are available at a low cost. Contact your VWR Sales Representative for more information.

Model	Capacity (ft <sup>3</sup> )	Dry Ice Pellets Capacity (lb)	Dimensions L x W x H (in)		Tare Weight (lb)
			Inner	Outer	
<b>89496-032</b>	4	200	22 x 12 x 26	26 x 16 x 33	47
<b>15715-168</b>	11	570	36½ x 21 x 24	43 x 27½ x 35¼	107
<b>87003-916</b>	11	570	36½ x 21 x 24	43 x 27½ x 39½	128
<b>10818-628</b>	19	990	37 x 41 x 20	43 x 48 x 31¾	165
<b>10818-630</b>	27	1,400	37 x 41 x 29	43 x 48 x 40½	188
<b>10818-632</b>	30	1,450	37 x 41 x 31	43 x 48 x 41½	193
<b>10818-634</b>	30	1,450	37 x 41 x 31	43 x 48 x 41½	243
<b>10818-636</b>	74	N/A	54 x 41 x 68½	61¼ x 48½ x 82	550

# Envoy<sup>®</sup> Diagnostic



Envoy is a simple and economical 2-8°C insulated shipping system that has been design-tested to ISCSilver<sup>®</sup> ambient temperature profile to address the need for temperature assurance in moderate shipping conditions.

Envoy Diagnostic combines the simplicity of Envoy with Sonoco ThermoSafe's line of diagnostic kits to create user-friendly and economic solutions for refrigerated temperature control of diagnostic kits, blood samples and other diagnostic specimens.

- A convenient all-in-one solution with proven thermal performance
- Ideal for 1 to 2 day shipments and small payloads
- Packouts are simple to follow and incorporate foam bricks for uniform temperature coverage.

The table below offers a list of Diagnostic and Infectious Shippers that are offered in both configurations (kits and Envoy shippers).

Envoy Model #	Included Diagnostic Kit	Shipping Duration (hrs)
Outer Dimensions: 15" x 13½" x 16" [381 x 337 x 406 mm]		
Weight: 22 lb [10 kg]		
89213-116	73320-122*	54
89213-118	16465-164*	54
89213-124	87003-906	54
89213-126	89050-566	54

\* Vials not included with the 89213-116 and 89213-118 models.



# ThermoSafe® DiagnosticShipper

87003-906



## FLEXIBLE MAILERS (WITHOUT TUBES)

Complies fully with U.S. Postal Service, DOT and IATA regulations for transport of clinical and diagnostic specimens [UN 3373]. Includes all required secondary and outer packaging components.

- Accommodates up to 16-10 ml plastic specimen tubes.
- Max capacity is 300 ml.

Model	Corrugated Carton I.D. (in)	Includes	Absorbent Sheets (in)	Bubble Wrap 6" X 24"	UN3373 Label
87003-906	9 1/2 x 4 x 4	1 Plastic envelope – printed with international biohazard symbol 6" x 9 3/8" /95 kPa (14 psi)	2 – 7 1/2 x 4 5/8 300 ml capacity	1	1
87003-908	11 x 8 x 4 1/4	2 Plastic envelopes– printed with international biohazard symbol 6" x 9 3/8" /95 kPa (14 psi)	4 – 7 1/2 x 4 5/8 600 ml capacity	2	1
89049-964*	N/A	95 kPa Plastic Bag	4 – 7 1/2 x 4 5/8 50/Case	25/Case	N/A

\* Accessory Kit for models 87003-906 and 87003-908. All models include 1 instruction sheet.

## DIAGNOSTIC SPECIMEN MAILING SYSTEMS

These ready-to-use combination packaging kits have been tested and certified for the transport of diagnostic specimens as defined by the applicable regulations, in conformance with IATA Packing Instruction 650, U.S. Postal Service and DOT regulations [UN3373].

- Foam shippers and packaging accessories also are available separately for use with customer-furnished primary receptacles.



73320-122

Model	Holds	Includes	Outer Dimensions L x W x H (in)	Replacement Parts Foam Mailers Only
16465-164	3 x 10 ml tubes*	10 ml tubes, EPS mailer and lid, absorbent material, waterproof tape, corrugated shipping carton, press lock poly bag, UN3373 label & instruction sheet	5 5/8 x 4 x 2	Model 73320-137 EPS mailer— 3 tube specimen mailer, foam only
73320-122	8 x 10 ml tubes*		10 1/2 x 5 5/8 x 3	Model 16465-160 EPS mailer— 8 tube specimen mailer, foam only



16465-164

\* Vials not included with the 89213-116 and 89213-118 Envoy Diagnostic models.





### 95 kPa BAGS

Specimen transport bags are liquid tight and tamper evident. The patented adhesive closure and continuous seal meet or exceed standards of all major air carriers and DOT. Polyethylene construction and adhesive closure provides added security during handling by personnel.

### 5-BAY SPECIMEN TRANSPORT BAG

5-bay 95 kPa specimen transport bag includes absorbent material in each pocket, enough to absorb 15 ml of urine or 10 ml of blood. This multi-layer polyethylene 95 kPa bag is IATA certified, marked with biohazard symbol and detailed closing procedures.

Model	Inside Dimensions (in)	Case Pack
89049-960	6 x 9 <sup>3</sup> / <sub>8</sub>	250
89049-962	9 x 12	300
89050-628	13 <sup>1</sup> / <sub>4</sub> x 17 <sup>7</sup> / <sub>8</sub>	100
89496-018*	10 <sup>1</sup> / <sub>4</sub> x 14	250

Model	Dimensions (in)		Case Pack
	Inner	Outer	
89050-564	8 <sup>3</sup> / <sub>8</sub> x 1 <sup>1</sup> / <sub>2</sub> (each pocket)	9 x 9 <sup>3</sup> / <sub>8</sub>	500

\* Bag without biohazard logo



## INFECTIOUS SHIPPERS AND OVERPACKS

Meets U.S. Department of Transportation [DOT] and IATA requirements for transporting infectious substances [UN 2814 and UN 2900].

3 models– accommodate shipments including 4 to 6 tubes/vials.

Pre-assembled packaging includes everything needed for shipping infectious agents in accordance with DOT Regulation 49 CFR Parts 171 to 178 and IATA Packing Instructions 602.



### DRY ICE OVERPACK 89496-022

Shippers protect frozen samples for over four days. The EPS foam container and lid accommodates Model 15714-540, plus 25 lb [11 kg] of dry ice. Foam insert holds in place while dry ice sublimates. Includes one Class 6 Infectious Substance label and one Class 9 Miscellaneous Dangerous Goods label [for dry ice], and shipping carton.

*Note: Compliance with UN/DOT regulations governing shipments of infectious substances in these approved shippers is contingent on the use of all supplied components. The Shipper is ultimately responsible for determining the suitability of packaging for use with contents. Consult appropriate regulations.*

Model	Vessel/ Dimensions (in)	Internal Cushioning	Capacity	Outer Dimensions L x W x H (in)	Supplied Labeling	Additional Features
<b>15714-540</b>	Aluminum can 3 x 6	Foam insert	Four 16 x 100 mm tubes	5 ½ x 5 ½ x 11 ¼	Infectious substance	Includes 4 x 10 ml blood collection tubes
<b>89496-022</b>	N/A	EPS Insulated Shipper	Overpack for Model 15714-540	14 x 14 x 14 ⅝	Infectious substance & miscellaneous dangerous goods	Foam insert holds up to 25 lb [11.3 kg] of dry ice in place
<b>89050-566*</b>	0.5 liter transparent container	Compartmentalized bubble pouch	Six tubes	4 x 4 x 6 ¾	Infectious substance & diagnostic	Liquid-tight container withstands up to 95 kPa pressure
<b>89050-568</b>	1.0 liter transparent container	Compartmentalized bubble pouch	Up to 50 ml	6 ¼ x 6 ¼ x 7 ½	Infectious substance	Liquid-tight container withstands up to 95kPa pressure; vessel is autoclavable for re-use

\* See page 31 for the corresponding Envoy Diagnostic shipping solution.



### INFECTIOUS SHIPPER 15714-540

Model 15714-540 includes EPS foam container, flexible foam insert, clear plastic press-lock bag, secondary packaging and absorbent material for full capacity of blood, corrugated carton, and step-by-step packing instructions.



### INFECTIOUS SHIPPER 89050-566

Infectious shippers include pressure vessel with stop-lock lid, compartmentalized bubble pouch, 50ml absorbent sheet, corrugated outer carton with required markings, shipper's declarations, and easy-to-follow instructions.

# ThermoSafe® LabMailer

## VIAL SHIPPERS

This unique array of shipping systems protects frozen and refrigerated shipping vials. These ready-to-use kits include everything to keep sensitive goods in top condition. Just load your product, add a U-tek® phase change material pack, and close the shipper.

- Shippers [Models 35751-330 and 35751-335] include U-tek and reusable polyethylene platform
- This series of Shippers [Models 82031-418 and 82031-422] include flexible polyurethane foam cushion



Model	Holds	Dimensions		Includes
		Inner L x W x H (in)	Outer L x W x H (in)	
<b>35751-330</b>	(12) 28 ml vials	8 x 6 x 7	11 x 9 x 10	EPS container and lid, 24 oz [680 g] U-tek® phase change material, reusable polyethylene platform and corrugated shipping carton
<b>35751-335</b>	(48) 28 ml vials	12 x 10¼ x 5½	14⅞ x 13¼ x 8¼	
<b>82031-418</b>	(24) 16–20 ml vials	8 x 6 x 7	11 x 9 x 10	EPS container and lid, corrugated shipping carton and 24-hole flexible foam insert
<b>82031-422</b>	(48) 16–20 ml vials	12 x 10¼ x 5½	14⅞ x 13¼ x 8¼	



# ThermoSafe® LabMailer



15715-160

Shown with optional 89049-968 mailer

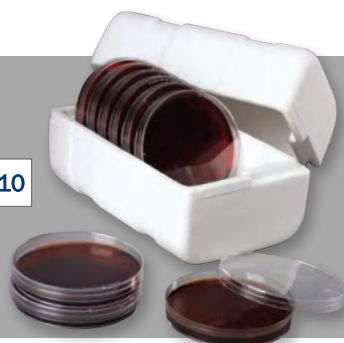
16191-180

Shown with optional 16191-185 mailer

73320-038

Model	Holds	Cavity Dimensions (in)	Outside Dimensions L x W x H (in)	Recommended Mailing Sleeve
73320-038	Cans, screw-cap vials, tubes, swabs, air filter cartridges	8 x 2 ¼ x 1 ½	9 ½ x 3 x 2 ¾	73320-040
16191-180	Specimen tubes, vials, swabs	5 ⅞ x 1 ½ x 1 ½	7 x 2 ½ x 2 ½	16191-185
15715-160	Tubes, vials, cans, bottles. Can be used with Poly-Pad foam cushion to keep containers from shifting	4 x 3 ½ x 3 ¼	5 ¼ x 4 ⅜ x 4 ⅜	89049-968
35751-310	10 standard petri dishes	6 ¼ x 3 ¾ x 4	7 ½ x 4 ⅞ x 5	82031-416
89496-024	Bottles, cans, vials, cups. Can be fitted with foam insert to hold small kit components	6 x 3 x 2 ½	7 x 4 x 3 ½	89496-026
16465-250	100ml sample containers, 4 oz [113 g] urine cup	3 ¾ x 2 ¼ x 1 ½	4 ¾ x 3 ¾ x 3 ¼	16465-254
15713-610	Vials, tubes, small bottles, tissue flasks with growth area of 75 cm <sup>2</sup> . Can be used with Model 89050-630 (flexible foam pad)	5 ⅞ x 4 ⅜ x 3	8 x 6 ½ x 5 ⅞	15713-520, 15715-140
73320-054	2 oz [57 g] bottle or Model 89049-972 (aluminum can)	3 ¼ x 2 dia.	4 ⅜ x 3 ¼ x 3 ¼	73320-046
15713-507	Tubes, vials, ampules	4 ¼ x 6 ¾ dia.	10 x 10 x 7 ½	Corrugated carton included

35751-310



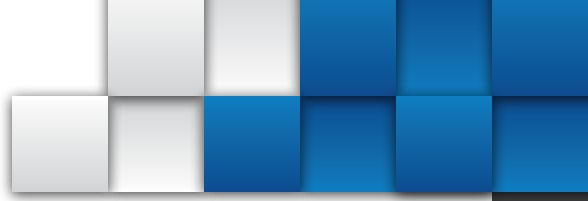
16465-250



Shown with optional 16465-254 mailer

73320-054





Model	Holds Tube/Slide Specifications				Outside Dimensions L x W x H (in)	Tube Cavity Dimensions (mm)	Recommended Mailing Sleeve
	Tubes	Slides	Tube Vol. (ml)	Tube Dimensions (mm)			
<b>73320-058</b>	1	N/A	3, 5, 7, 10	Dia.: 10.25 to 16 Length: 75 to 103	5 3/4 x 2 1/4 x 2	110 x 16	<b>73320-068</b>
<b>73320-066</b>	2	2	5, 7, 10	Dia.: 10.25 to 16 Length: 75 to 103	5 1/2 x 3 1/2 x 1 3/4	107 x 16	<b>73320-070</b>
<b>73320-076</b>	3	N/A	3, 5, 7, 10	Dia.: 10.25 to 16 Length: 75 to 103	5 1/8 x 4 1/2 x 1 1/4	105 x 17	<b>15714-505</b>
<b>73320-062</b>	4	8	7, 10	Dia.: 16 Length: 75 to 100	6 3/8 x 5 1/2 x 1 3/4	110 x 19	<b>73320-080</b>
<b>73320-084</b>	5	N/A	3, 5	Dia.: 10.25 to 13 Length: 75 to 103	5 1/8 x 4 1/2 x 1 1/2	105 x 13	<b>15714-505, 73320-072</b>
<b>15714-463</b>	5	N/A	7, 10, 15, 25	Dia.: 16 Length: 75 to 150	7 7/8 x 5 1/4 x 1 1/2	170 x 16	<b>15714-470</b>
<b>73320-086</b>	8	8	5, 7, 10	Dia.: 10.25 to 16 Length: 75 to 103	10 x 5 1/2 x 1 3/4	113 x 18	<b>73320-074</b>
<b>48429-305</b>	N/A	10	N/A	N/A	4 x 2 1/2 x 2	N/A	



## ALUMINUM CANS

Accommodates most widely used laboratory collection tubes, vials, and bottles. Helps prevent breakage during handling and shipment. Seamless construction with lined screw-caps to prevent leakage. Completely autoclavable. EPS foam mailers and mailing sleeves available.

Model	Dimensions (in)		Recommended EPS Mailer
	Can	Outer (L x W x H)	
<b>89049-972</b>	1 3/4 dia. x 4 3/4	2 dia. x 4 7/8	<b>15714-525</b>
<b>89049-974</b>	2 1/2 dia. x 6	2 5/8 dia. x 6	N/A



## MINI MAILERS—for temperature-sensitive shipments

Maximum breakage protection for known non-hazardous blood, serum, tissue, and other specimens. Accommodates VacuTainer<sup>®</sup>, Microtainer<sup>®</sup>, and other collection/transport tubes.\* Available in multi-tube, slide, and tube/slide combinations. Lightweight, reusable and recyclable.

\*Trademarks of Becton Dickinson

- Compact protection for temperature-sensitive shipments, ideal for serums, tissues, and reagents
- Accommodate tubes, vials, ampules, small bottles, petri dishes, cans, and tissue flasks with space for refrigerants
- Insulating, thick-wall polystyrene foam construction
- Walls on Model 15713-610 are 1 in. [25 mm] thick
- Maximum breakage protection for non-hazardous laboratory specimens. Ideal for biological, environmental, research and development, public health, industrial hygiene, and veterinary use
- Reusable and recyclable
- Standard mailing sleeves available



Recommended Mailing Sleeves	Foam Mailer	Sleeve Dimensions L x W x H (in)	Sleeves/Case
<b>73320-058</b>	<b>73320-068</b>	6 x 2 <sup>3</sup> / <sub>8</sub> x 2 <sup>1</sup> / <sub>8</sub>	300
<b>73320-066</b>	<b>73320-070</b>	5 <sup>5</sup> / <sub>8</sub> x 3 <sup>1</sup> / <sub>2</sub> x 1 <sup>7</sup> / <sub>8</sub>	300
<b>73320-076</b> <b>73320-084</b>	<b>73320-072,</b> <b>15714-505</b>	5 <sup>3</sup> / <sub>8</sub> x 4 <sup>5</sup> / <sub>8</sub> x 1 <sup>5</sup> / <sub>8</sub>	300
<b>73320-062</b>	<b>73320-080</b>	6 <sup>5</sup> / <sub>8</sub> x 5 <sup>5</sup> / <sub>8</sub> x 1 <sup>7</sup> / <sub>8</sub>	200
<b>15714-463</b>	<b>15714-470</b>	8 <sup>1</sup> / <sub>8</sub> x 4 <sup>3</sup> / <sub>4</sub> x 1 <sup>5</sup> / <sub>8</sub>	200
<b>15713-520</b> <b>15715-140</b>	<b>15713-610</b>	8 x 6 x 5 <sup>1</sup> / <sub>4</sub>	96 24
<b>73320-086</b>	<b>73320-074</b>	10 <sup>1</sup> / <sub>4</sub> x 8 <sup>3</sup> / <sub>4</sub> x 1 <sup>7</sup> / <sub>8</sub>	200

See page 35-37 for information about Foam Mailers.

### Model 89050-632 Economy Pack

Includes:

- 24 – Model 15713-610 Mini Mailers
- 36 – Model 15715-137 U-tek<sup>®</sup> refrigerant packs -23°C (-10°F)

### Model 87006-048 Economy Pack

Includes:

- 24 – Model 15713-610 Mini Mailers
- 36 – Model 15715-134 U-tek refrigerant packs -1°C (+30°F)

See page 14 for more information on U-tek refrigerant packs.

### MAILING SLEEVES 73320-072, 15714-505

Sturdy 18-point white paperboard sleeves increase the cost-effectiveness of foam mailers. Reverse tuck closures enable foam mailers to withstand multiple trips. Sleeves 73320-072 and 73320-074 are printed.



## LABWARE

ThermoSafe® LabWare aid temperature-sensitive enzymes and reagents at workstations. Durable components are designed for convenience while in transit or in-use.

### Low-Temp Chiller 73320-026

Economical cold trap or alcohol/dry ice bath. Convenient shallow depth has 1½ in [38 mm] insulating walls.

Holds: wet or dry ice, alcohol

Measures: I.D.– 19¾ x 11¼ x 3⅞ in O.D.– 22⅝ x 14⅞ x 7¼ in



## BOTTLE SHIPPERS

Lightweight, economical EPS foam shippers for reagents, pharmaceuticals, biological preparations and other non-hazardous goods. Laboratory tested and accepted for use by UPS, Parcel Post, and common carriers. No outer shipping carton required, pressure-sensitive labels adhere directly to foam shipper. Reusable and recyclable.

Model	Bottle	Dimensions L x W x H		Recommended Mailing Sleeves
	Type	Bottle Cavity* in	Outer in	
<b>73320-054</b>	57 ml [2 oz] Boston Round or aluminum can	1⅞ dia. x 3	4⅞ x 3 x 3	<b>73320-046</b>
<b>15714-525</b>	114 ml [4 oz] Boston Round or aluminum can	5¼ dia. x 2	6¼ x 3¼ x 3⅜	<b>73320-044</b>
<b>14100-416</b>	4 liter [1 gallon] cider jug style	6¼ dia. x 11½	10 x 10 x 14⅝	N/A
<b>82031-424</b>	4 liter [1 gallon]	8 x 8 x 16⅝	8¼ x 8¼ x 17½	N/A
<b>14100-426</b>	946 ml [1 quart] Boston Round	3¾ dia. x 8⅜	10½ x 5½ x 5½	N/A
<b>14100-408</b>	473 ml [1 pint] Boston Round	3 dia. x 7⅝	4¾ x 4¾ x 10	N/A
<b>14100-424</b>	473 ml [1 pint] Boston Round	3¼ dia. x 7½	8⅞ x 4½ x 4½	N/A

# ThermoSafe®

## Packaging Materials



### ABSORBENT SHEETS

Designed to absorb and encapsulate spills in accordance with UN/DOT regulations, U.S. Postal Service, and recommendations for the packaging and transportation of diagnostic specimens, biological materials, and other dangerous goods. Tissue-based paper substrate constructed with super-absorbent polymers help prevent leakage, and possible contamination.



### METALLIZED BUBBLE POUCH WITH SELF SEALING LIP AND TAPE

Lightweight and easy to use. Saves inventory space. Constructed of  $\frac{3}{16}$  in [9 mm] metallized bubble with 2 in [51 mm] lip and tape.

Model	Dimensions (in)	Sheet Capacity	Case Pack
<b>89050-008</b>	3 x 3	90 ml of water 22.5 ml blood	10,000
<b>89050-006</b>	6 x 6	360 ml of water 90 ml blood	500
<b>89050-004</b>	12 x 12	1440 ml of water 360 ml blood	500

Model	Dimensions (in)	Case Pack
<b>89050-634</b>	8 x 11	350
<b>89050-636</b>	12 x 11	250
<b>89050-638</b>	12 x 17	200
<b>89050-642</b>	12 x 23	150
<b>89050-644</b>	18 x 23	100



# ISCLabs®

## DESIGN & TESTING SERVICES AVAILABLE

### THE ISC LABS DIFFERENCE:

ISC Labs has a specialized focus on engineering and testing services to provide optimized temperature assurance packaging solutions for each customer's specific needs.

Industry-leading thermal modeling capabilities enable rapid development of highly optimized custom solutions. Multiple design alternatives are presented to allow each customer the ability to easily analyze their options. Materials including EPS, PUR, VIP, and phase change materials are prototyped as necessary.

Thermal testing is accompanied by distribution testing to prove each temperature assurance packaging solution not only maintains temperature control, but also withstands the rigors of distribution.



Laboratory and engineering staff work with clients throughout all phases of the packaging development and testing process. Engineering professionals review test progress, develop modifications, and recommend alternative approaches to ensure the client's valuable products maintain their temperature requirements during each stage of the "cold chain."

For more information visit our website or call our customer service department at **1-800-932-5000**.

TO ORDER, CALL US AT: 1-800-932-5000

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# NOTES

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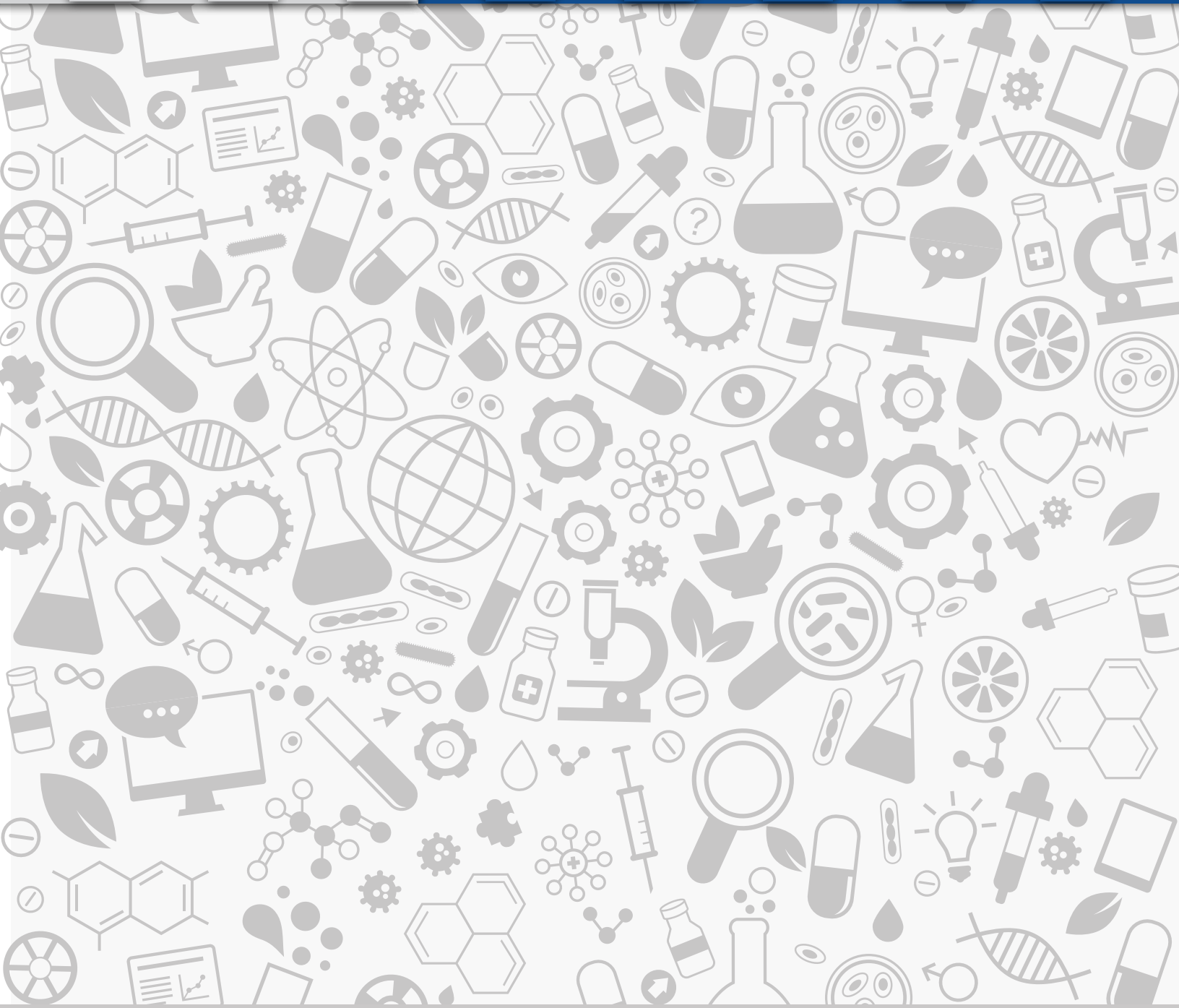
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# SONOCO THERMO SAFE®



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