

CryoSure[®]

A revolution in -70°C cryogenic shipping

A revolution in -70°C cold chain transportation

Whereas most of the temperature-controlled pharmaceutical shipment solutions have historically involved temperature ranges of 2–8°C and 15–25°C, many pharma products and biospecimen samples require below -70°C shipments. More importantly, many new products within Cell & Gene Therapy, Clinical development, other non-finished products as well as mRNA vaccines have to be transported below -70°C.

The CryoSure[®] dry ice -70°C shipping solution delivers your most treasured pharma product in perfect condition. It eradicates deviations through a consistently reliable and secure shipment cycle. By combining groundbreaking innovation, technology and service backed by Envirotainer's 35-year industry experience and expertise CryoSure[®] sets an entirely new standard in -70°C shipping. It has unmatched performance, superior duration and is the most sustainable solution on the market.

Superior duration

The CryoSure[®] platform has an ISTA 7D summer validation for below -70°C for between 8 and 21 days (2–7 times better than any competing technology) making it the most secure solution on the market. Through a unique QR-code system you can get an estimate of the remaining duration on your mobile phone, at any stage of the transport.

Unmatched performance

The CryoSure[®] platform maintains the temperature stable at below -70°C throughout the entire shipment period, unlike most traditional dry ice solutions where the temperature slowly increases for each passing day. Furthermore, the product space maintains its temperature below -70°C even if the unit is opened or exposed to high temperatures. Temperature control performance is not affected by orientation.



Safest and easiest to handle

The CryoSure[®] platform arrives pre-charged to the customers which makes it both easier and safer to handle than competing technologies. No more need for assembly, no more having to source and handle dry ice locally, no more pre-conditioning of boxes. Just open the box, take off the lid, load the pharma product, close up and ship.

Best value – most sustainable

The CryoSure[®] system is a fully reusable cold chain shipping solution. It is volume efficient, less bulky, and has a 2–3 times better weight to volume efficiency compared to existing dry-ice boxes and LN2. This translates into both significantly reduced transportation costs, as well as significantly reduced carbon emissions.

Real time visibility

You can track your shipment with Envirotainer's Live monitoring platform and you can always monitor your CryoSure[®] shipment in Envirotainer Portal, allowing you to have 24/7 visibility throughout the trip and provide proof of the integrity of your valuable cargo.

Unparalleled system support

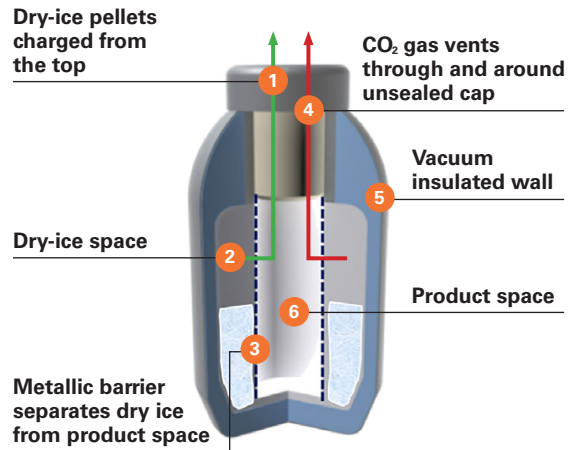
The CryoSure[®] platform is backed by Envirotainer's market leading system support. You can book your CryoSure[®] unit on Envirotainer's portal just 48 hours in advance. The CryoSure[®] can be returned to any of our CryoSure[®] stations.

How it works

The CryoSure® flask is made from durable, high-grade aluminum and delivered inside a sturdy cardboard box filled with foam for additional protection and easier stacking. The product space, made from the same material as the exterior bottle, is chilled to below -70°C with dry-ice pellets/rice charged from the top. To ensure minimal heat transfer, the walls are vacuum insulated. The unique design is what makes it possible for the CryoSure® bottles to maintain the temperatures stable between 2–7 times longer than any competing technology.

A solution for every need

The CryoSure® platform offers four different sizes depending on the needs of the customer: The CryoSure® X1 (1.0L), the CryoSure® X2 (1.6L), the CryoSure® X5 (5.0L) and the CryoSure® X11 (11.1L).



CryoSure® Range



	CryoSure® X1		CryoSure® X2		CryoSure® X5		CryoSure® X11	
Product space opening (D)	9.0cm	3.5"	9.0cm	3.5"	15.2cm	6.0"	21.3x21.3cm	8.4x8.4"
Product space (DxH)	8.1x19.5cm	3.2x7.7"	8.1x31.9cm	3.2x12.6"	14.3x31.5cm	5.6x12.4"	20.7x33.2cm	8.1x13.1"
Product space volume	1.0L	33.7oz	1.6L	55.0oz	5.0L	170.3oz	11.1L	376.3oz
Outer box dimensions (L/WxH)	27.0x42.4cm	10.6x16.7"	29.6x58.9cm	11.7x23.2"	33.6x58.9cm	13.2x23.2"	45.6x64.2cm	18.0x25.3"
Weight fully charged	4.8kg	10.6lbs	9.8kg	21.5lbs	11.2kg	24.8lbs	19kg	41.88lbs
Dry-ice fully charged	1.2kg	2.5lbs	3.5kg	7.7lbs	3.2kg	7.2lbs	5.5kg	12.0lbs
Duration	>8 days		>21 days		>13 days		>15 days	

CryoSure® version	# of 2 mL vials	2 mL vial configuration	
CryoSure® X1	20	Canister holding 2 bags, 10 vials/bag	
CryoSure® X2	80 70	Canister holding 16 canes without sleeves, 5 vials/cane Canister holding 14 canes with sleeves, 5 vials/cane	
CryoSure® X5	300 200	Canister holding 60 canes without sleeves, 5 vials/cane 2 boxes oriented vertically; 100 vials/box	
CryoSure® X11	600 500	120 canes without sleeves in bags; 5 vials/cane Rack holding 5 boxes; 100 vials/box	