

LIQUID NITROGEN DRY SHIPPERS



Preparation and Shipping Requirements

Dry shippers are shipping dewars or insulated containers containing a porous material (foam). These units are designed for the safe shipment of specimens at liquid nitrogen temperatures but without the risk of spilling liquid nitrogen (LN₂).

When prepared for shipping these units should not contain any free liquid.

Shipping regulations: LN₂ is considered a Hazardous Material and regulated by the United States Department of Transportation (USDOT). However, a correctly prepared dry shipper is not.

Precautions: Please always be careful while working with LN₂. Make sure to use the right Personal Protective Equipment (PPE) (closed toed shoes, gloves, face protection and cryo-gloves). Always remember that LN₂ can cause severe frostbite. Please also make sure to work in well ventilated areas as high concentrations of nitrogen can cause suffocation.

Filling the dry shipper:

1. Slowly fill your dry shipper with liquid nitrogen (LN₂). When the liquid reaches the neck of the dry shipper, stop filling the unit. Replace the cap and set the dry shipper away. Make sure to follow the charging period specified by the manufacturer. This period will allow the LN₂ to saturate the dry shipper's absorbent material.
2. Check the dry shipper and add more LN₂ until the liquid level no longer drops down. This could take several hours depending on the unit.
3. Once the LN₂ level no longer drops let the dry shipper cool down for at least 24 hours.

Shipping instructions:

4. On the shipping day remove ALL LN2 from the dry shipper.

Note: This unit must be shipped without liquid inside.

5. Wearing the appropriate Personal Protective Equipment (PPE), empty the dry shipper content into a designated container or larger dewar.

Note: NEVER pour LN2 down the sink as it could crack the pipes in your laboratory. Same applies to the floor. Always remember that LN2 could splash onto your shoes or legs and cause severe burns.

6. Hold the dry shipper upside down until the unit is completely empty of liquid.

- a. Some manufacturers suggest leaving the dry shipper upright for a certain time to allow liquid to come off from the absorbent material. Remove any liquid as needed.

7. Place your samples

8. Place the dry shipper inside the protective case.

A correctly prepared dry shipper is not considered hazardous materials. We recommend shipping FedEx Priority Overnight during Monday-Thursday.

For more questions, please email us at: Info@N2Rentals.com