

## Vapor Shipper Exemption Letter

Doble Series	YDH Series	Cryoshipper	Other Models
Doble 11	YDH-1	Cryoshipper	SC 2/1V
Doble 20	YDH-3	Cryoshipper XC	SC 4/2V
Doble 22	YDH-8-80	IATA Cryoshipper	CryoCube
Doble 28	YDH-8-90	CT-50	BL-7
Doble 34	YDH 15-125	CT-250	MVE 1536PD-150 Dry
Doble 47		Cryoshipper 2000	Shipper
Doble 47-10			
ET-24-10 Doble			

This is concerning the applicability of the Federal Hazardous Material Regulations to the shipment of refrigerated samples in the above "Dry Shipper" (vapor shipper) products.

A "Dry Shipper" package consists of an outer container that is lined with an absorbent material. The container is charged with nitrogen-refrigerated liquid, which is absorbed into the container lining. The charged, completed package serves as a refrigerated container for the shipment of samples.

Due to the manner in which it is absorbed and because there is no free liquid present in the packaging, the liquid nitrogen does not exhibit the characteristics of a "cryogenic liquid" as defined in 49 CFR 173.115 (g) and does not pose a hazard in transportation. Therefore, it is not subject to regulation under the Department of Transportation's Hazardous Materials Regulations.

However, if the packaging is improperly offered for transportation WITH free liquid present, it would be subject to regulation when offered for transportation by air (see 49 CFR 173.320) and must be offered in accordance with the International Civil Aviation Organization's (ICAO) Technical Instruction. Note the packaging does not conform to ICAO Packaging Instruction 202 and therefore, is not an authorized packaging when containing free liquid.

In consideration of the above, consultation with the Research and Special Programs administration of the DOT has determined that the use of nitrogen refrigerated liquid charged "dry shipper" containers for the shipment of samples falls within the regulation exception provided in 49 CFR 173.30 paragraph (a) of the section states the requirements of this subchapter do not apply to atmospheric gases and helium when used in the operation of the process system, such as a refrigeration system. Paragraph (c) of 173.320 pertains to air transport of same refrigeration system. For exception status of air shipments please refer to IATA-Dangerous Goods Regulations for nitrogen-refrigerated liquid. This falls in the class of 2.2 nonflammable gas, packing instructions 202 with special provisions A-152.

Corey Rakes

**Director of Aluminum Products** 

**MVE Biological Solutions**