

Disclaimer: This document contains three (3) pages and is only an interpretation. As a shipper of compressed gases, you are required by Federal Law to have training in accordance with 49CFR Part 172. Therefore, we cannot be held responsible for any shipment you make.

HOW TO SHIP NITROUS OXIDE (UN1070), N₂O, FILLED CYLINDERS

The cylinders you have purchased from Leland are all less than 4 fluid ounces in capacity (if you were to fill them with water.) Therefore, they qualify under CFR Title 49 173.306, Limited Quantity (ORM-D). There are several categories of methods of shipping:

GROUND TRANSPORTATION

These cylinders are less than 100 cc's in capacity, and therefore, are considered by U.S. DOT to be Limited Quantity and qualify as ORM-D. To meet these requirements of ORM-D, the **Shipper shall clearly mark the shipping carton ORM-D and above or below that "Consumer Commodity."** There are many label manufacturers who stock such labels such as Labelmaster in Chicago, Illinois.

- a. **UPS**--When shipping via UPS, the above carton markings apply. These goods are exempt from hazardous material markings and labeling (such as the Non-Flammable gas label.) These cylinders do not need to be recorded in a hazardous material book, nor does a hazardous material certification need to be executed by the shipper. The UPS Hazardous Material people will try to make you do this, which yields them additional revenue per carton. UPS is not an enforcement agency but merely a trucking company.
- b. **RPS**--RPS also accepts this exemption of hazardous materials markings/labeling.
- c. **Common Carrier - Truckers** - (i.e., Yellow, Consolidated, ABF, etc.) When making a shipment via truck, the same laws apply. Since the cylinders qualify as ORM-D, some type of description needs to be formulated for a freight description/classification. Your Bill of Lading should read:

Restaurant Equipment/Supplies
ORM-D Consumer Commodity
XX Cartons on 1 Pallet

Air Transportation

In general, Nitrous Oxide filled cylinders are **always** considered a hazardous material when offered for air transportation. In all cases, it is the pilot's discretion to allow these dangerous goods aboard

his or her aircraft. Therefore, it is suggested to allow extra time when shipping via air. I.A.T.A is the governing authority when shipping by air. It is recommended that you purchase a copy of the latest I.A.T.A. Regulations for shipments of hazardous material.

Domestic Air Shipments

- a. **Federal Express** - Shippers should use the 5400 Series air bills with an attached "Shippers Declaration for Dangerous Goods." The cylinders should be packed into a double-walled corrugated carton. This is called "Performance Packaging." On either end of the carton, a green "Non-Flammable Gas" label and a yellow "Oxidizer" label must appear near the UN1070 number. Additionally, the shippers telephone number and address must also appear on the carton. In our experience it is best to put the proper shipping name of the Commodity, i.e., Nitrous Oxide Gas on a label above the green "Non-Flammable Gas" and yellow "Oxidizer" label. Previously, we have written this information and it has been rejected.
- b. **Burlington Air Express** - Shippers should contact Burlington for their Short Form air bill and a separate shipper declaration for dangerous goods. Carton markings and labeling are the same as Federal Express.
- c. **Emery Air** - Same as above for Burlington Air.
****NOTE**** Please note that Burlington Air will ask the Shipper to fax the documents to their terminal prior to the package being picked up. This is an extremely useful way to prevent costly delays by the terminal rejecting the cartons.

Please note that it is not unusual for Federal Express or any other air carrier to "bump" a hazardous material shipment for improper carton markings or paperwork not conforming to I.A.T.A. Regulations.

UPS--Effective October 1, 1993, UPS is allowing "ORM-AIR" Shipments. Please contact UPS regarding this, as you will need to have a separate book and special labels, which UPS will give you.

International Air Shipments:

Almost all of the above rules apply to International Air Shipments and a "Export Declaration" will generally be requested. Additionally, "Commercial Invoices" for Customs purposes are required.

Special Note for International Air Shipments

We suggest that you use a freight forwarder or broker for all International Air Shipments, as each air carrier has specific rules about the quantity of the hazardous substance in a single carton. Check with the appropriate carrier for details.

The term "Performance Packaging" often arises when shipping hazardous material. Although this

term has not been clearly defined to Leland as such, we interpret it to refer to an outer package to prevent the inner package from spilling, leaking, or contaminating other cartons in shipment.

Again, we strongly suggest that air shipments are kept to a minimum because of the paperwork and the inconvenience associated with "bump" shipments. Please do not contact Leland regarding DOT regulations or hazardous material labeling for other than products manufactured by Leland. Your cooperation is sincerely appreciated.

Ocean Freight Shipments

Because the goods contained in this shipment are either an oxidizer or flammable, it is suggested to use a hazardous material shipper with knowledge of these commodities.

Submitted by,



Leland C. Stanford
President and Head
of Quality Control

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