

*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 CARBON DIOXIDE (UN1013) CO<sub>2</sub> 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 and 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 that 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 all 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 the purpose of a freight description/classification. For example, when we ship our CO<sub>2</sub> cylinders to a life jacket manufacturer, the Bill of Lading reads as follows:

Steel Life Jacket Parts  
ORM-D, Consumer Commodity  
XX Cartons on 1 Pallet

Another example is when we ship our CO<sub>2</sub> Power Clean™ products to the photographic industry, the Bill of Lading would read as follows:

Photographic Cleaning Supplies  
ORM-D, Consumer Commodity  
XX Cartons on 1 Pallet

### AIR TRANSPORTATION:

In general, Carbon Dioxide filled cylinders are **always** considered a hazardous material when offered for air transportation. In all cases, it is the pilot's discretion whether 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 "Shipper's 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 must appear, and the UN1013 number must also be near the green, diamond-shaped label. Additionally, the shipper's telephone number and address must appear on the carton. In our experience it is best to put the proper shipping name of the Commodity (i.e., Carbon Dioxide Gas) on a label above the green "Non-Flammable Gas" 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's Declaration for Dangerous Goods." Carton markings and labeling are the same as Federal Express.
- c. **Emery Air**--Same instructions as 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 caused 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 the I.A.T.A. Regulations.

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

### International Air Shipments:

Almost all of the above rules apply to International Air Shipments and an "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 concerning the quantity of the hazardous substance in a single carton. Check with the appropriate carrier for specific 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 referring 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 products not manufactured by Leland. Your cooperation is sincerely appreciated.

**Ocean Freight Shipments**

The following words are used to properly describe and classify CO2 cartridges of less than 100cc's. Generally, this statement is on the invoice and packing list as well as any Bills of Lading: "The subject goods contained on this invoice are less than 100 cc's in capacity and overpacked in fiberboard boxes, which do not exceed a gross mass of 40kg. Therefore, the provisions of the IMDG code do not apply. 'IMDG Page 2111, Class 2.2.' All of the chemicals in this shipment are not subject to TSCA."

Submitted by,



Leland C. Stanford  
President and  
Head of Quality Control

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