



U.S. Department  
of Transportation

Pipeline and Hazardous Materials  
Safety Administration

1200 New Jersey Ave., SE  
Washington, DC 20590

AUG 17 2009

Mr. David Stark  
Purchasing Supervisor  
Bioject, Inc.  
20245 S.W. 95<sup>th</sup> Avenue  
Tualatin, Oregon 97062

Ref. No. 09-0018

Dear Mr. Stark:

This responds to your letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) as applied to certain carbon dioxide cylinders that are used in a medical device to administer needle-free injections. Specifically, you ask whether the cylinders may continue to be carried on board passenger-carrying aircraft in checked or carry-on baggage under the exceptions for passengers and crewmembers in § 175.10 of the HMR and if three previously issued interpretations on the issue (07-0078, 02-0193 and 00-0206) remain valid. Additionally, you ask whether the cylinders may be offered as cargo to a passenger-carrying air carrier under the excepted quantities provisions in § 173.4a of the HMR.

The answer to all of your questions is yes. The cylinders may continue to be carried on board an aircraft in checked or carry-on baggage by a passenger or crewmember under the personal-use exceptions for non-radioactive medicinal and toilet articles in § 175.10(a)(1)(i). The previously issued guidance remains valid. Under the provisions for excepted quantities in § 173.4a, a Division 2.2 gas without a subsidiary hazard that is packaged in a pressure vessel with a water capacity of 30 mL (1.8 cubic inches) or less may be offered for transportation by all modes under the conditions specified. Therefore, if the cylinders described in your letter comply with the requirements of § 173.4a, they would be eligible for the excepted quantity exceptions.

I trust this satisfies your inquiry. Please contact us if we can be of further assistance.

Sincerely,

Hattie L. Mitchell  
Chief, Regulatory Review and Reinvention  
Office of Hazardous Materials Standards

January 29, 2009

Pipeline and Hazardous Materials Safety Administration  
[phmsa.webmaster@dot.gov](mailto:phmsa.webmaster@dot.gov)

Stevens  
\$175.10  
Aircraft  
09-0018

**Request for Opinion** (See carbon dioxide cartridge specification below)

1. Opinion on whether high-pressure Carbon Dioxide UN1013 (CO<sub>2</sub>) cartridges can be shipped within the United States as "Excepted Quantities" per CFR/ ICAO regulations.
2. Verification whether a previous opinions (see below 07-0078 and 02-0193) are still valid for CO<sub>2</sub> cartridges carried by a passenger, on a passenger aircraft, within the United States.
  - a. As carry on luggage
  - b. Packed in cargo luggage

**Background**

Bioject is a manufacturer of needle free injection devices used in medical and veterinary applications. One of our devices, the Biojector B2000 <http://www.bioject.com/biojector2000.html>, uses a disposable pressurized CO<sub>2</sub> cartridge to operate the device. The cartridge is very similar to any other CO<sub>2</sub> cartridge used in to carbonate beverages (seltzer bottles), or other consumer products.

The cartridges are made in Japan by Nittan (Nippon Tansan Gas Co. Ltd.), and distributed in the United States by Leland Limited, Inc., New Jersey.

Bioject ships Biojector products to customers throughout the U.S. and the world. Currently, we have been the cartridges as ground shipments as a Consumer Commodity, or via air as hazardous material per 49 CFR instructions.

Quite often, because the CO<sub>2</sub> is used as a medical product, our customers need immediate shipments. The cost of shipping these products via air as hazardous material is very expensive, nearly \$400 for even one cartridge. This cost is so prohibitive, that out customers are considering discontinuing this product.

**Excepted Quantities**

It is our opinion that the UN1013 cartridges can be shipped on cargo and/or passenger aircraft as "Excepted Quantity", but would like verification from the Department of Transportation.

**Note:**

- UN1013 Limited Quantity is Forbidden.
- We have concluded that the cartridges cannot be shipped as UN2037 due to the high pressures produced by the CO<sub>2</sub> cartridges.

**Passenger Carry-on and Luggage**

We have previously received opinions 07-0078 and 02-0193 (below) regarding carry-on of CO2 cartridges. After reviewing the current HMR it is not clear to me that these opinions are still valid. Please review and issue an opinion.

**Contact Information**

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