U.S. Department
of Transportation

**Research and
Special Programs
Administration**

DEC 22 1999

400 Seventh Street, S.W.
Washington, D.C. 20590

DOT-E 12171

EXPIRATION DATE: December 15, 2001

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Arichell Technologies, Inc.
West Newton, MA

2. PURPOSE AND LIMITATION:

a. This exemption authorizes the transportation in commerce of nitrogen, compressed in a non-DOT specification packaging (polyethylene terephthalate bottle). The nitrogen is used for the sole purpose of expelling a nonhazardous liquid (soap). This exemption provides no relief from any Hazardous Materials Regulation (HMR) other than as specifically stated herein.

b. The safety analyses performed in development of this exemption only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use or other uses not associated with transportation in commerce.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.302(a) in that a non-DOT specification packaging is authorized.

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5. BASIS: This exemption is based on the application of Arichell Technology, Inc. dated October 30, 1998 and additional information dated June 3, September 10, November 4 and 5, 1999 submitted in accordance with § 107.105 and the public proceeding thereon.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Nitrogen, compressed	2.2	1066	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification, nonrefillable inside container manufactured from polyethylene terephthalate. The container has a water capacity not exceeding two liters (122.05 cubic inches) and conforms with Arichell Technologies Packaging Specification AZQ-014, Rev. A dated September 25, 1998 and drawing no. C-778-02-001, Revision 1, dated 11/18/98 on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA).

b. TESTING - One completed container taken randomly from each container lot of 1,000 or less successively produced must be pressure tested to destruction. The burst pressure of each container may not be below 200 psig. If the test container fails to meet the above requirements, the lot must be rejected. However, an additional 5 randomly selected containers from that lot may be burst tested to qualify that lot. If any of the additional test containers fail the burst test, the entire lot must be rejected.

c. OPERATIONAL CONTROLS:

(1) Filling Conditions -

(a) The container may not be liquid full at any temperature up to and including 130°F.

(b) The pressure in the container may not exceed 45 psig at 70°F and 105 psig at 130°F.

(2) Filling verification test - One container out of each lot of containers filled for shipment must be heated until the pressure in the container is equivalent to the equilibrium pressure of the contents at 130°F without evidence of leakage, distortion, or other defect. If the pressure of the test container exceeds 105 psig or the test container shows evidence of leakage, distortion, or other defects, the lot must be rejected. However, an additional 5 randomly selected containers from that lot may be tested to qualify that lot. If any of the additional test containers fail the burst test, the entire lot must be rejected.

(3) Each container must be packed in strong outside packagings as prescribed in § 173.301(k).

(4) Each outside packaging must be marked "INSIDE CONTAINERS CONFORM WITH DOT-E 12171".

(5) Each package may not exceed 66 pounds gross weight.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this exemption who receives a package covered by this exemption may reoffer it for transportation provided no modifications or changes are made to the package and it is reoffered for transportation in conformance with this exemption and the HMR.

b. A current copy of this exemption must be maintained at each facility where the package is offered or reoffered for transportation.

c. Each container must be marked "DOT-E 12171" as specified in § 172.301(c).

d. Test data obtained under paragraph 7.b. of this exemption, must be kept on file and be made available upon request by the OHMEA. Additionally, the following information must be submitted to OHMEA:

(1) Burst test results for the first 20 lots tested under paragraph 7.b. of this exemption.

(2) Lading temperature and pressure test data for the first 20 lots to verify that the pressure in the container is equivalent to the equilibrium pressure of the contents at 130°F without evidence of leakage, distortion, or other defect and that the pressure in the container does not exceed 105 psig at 130°F as specified in paragraphs 7.c.(1) and 7.c.(2) of this exemption.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo aircraft only.

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel and aircraft used to transport packages covered by this exemption. The shipper must furnish a copy of this exemption to the air carrier before or at the time the shipment is tendered.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this exemption and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 *et seq*:

- All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this exemption must receive training on the requirements and conditions of this exemption in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this exemption, including display of its number, when this exemption has expired or is otherwise no longer in effect.

12. REPORTING REQUIREMENTS: The carrier is required to report any incident involving loss of packaging contents or packaging failure to the Associate Administrator for Hazardous Materials Safety (AAHMS) as soon as practicable. (Sections 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holder(s) of this exemption must inform the AAHMS, in writing, of any incident involving the package and shipments made under the terms of this exemption.

Issued at Washington, D.C.:

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Alan I. Roberts
Associate Administrator for
Hazardous Materials Safety

(DATE)

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.
Attention: DHM-31.

The original of this exemption is on file at the above office. Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

Copies of exemptions may be obtained from the AAHMS, U.S.

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Department of Transportation, 400 7th Street, Washington, DC 20590-0001, Attention: Docket Section, 202-366-5046.

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