U.S. Department of Transportation
Research and Special Programs Administration

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

DOT-E 10359
(SECOND REVISION)

FEB 15 1996

EXPIRATION DATE: January 31, 1998

(FOR RENEWAL, SEE 49 CFR SECTION 107.105.)

1. GRANTEE: High Pressure Integrity (HPI) Incorporated
New Orleans, Louisiana

2. PURPOSE AND LIMITATION: This exemption authorizes the transportation in commerce of bromine trifluoride, classed as a Division 5.1 material, contained in non-DOT specification, nonrefillable cylinders. This exemption provides no relief from any regulation other than as specifically stated herein.

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

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR Sections 173.228 and 175.3.

5. BASIS. This exemption is based on HPI's application dated December 29, 1995, submitted in accordance with 49 CFR 107.105.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous materials description/proper shipping name	Hazard Class/ Division	Identification number	Packing Group
Bromine trifluoride	Division 5.1	UN1746	I

7. PACKAGING AND SAFETY CONTROL MEASURES:

a. PACKAGING - Packagings prescribed are non-DOT specification, nonrefillable cylinders constructed from AISI 4130, 4135, or 4140, SRA grade seamless steel tubing processed and certified to ASTM A519, of outside diameter not greater than 2 inches, and with threaded plug closures with O-ring seals at each end. The design and construction of the cylinders must conform with HPI's drawings on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA). The cylinders range from: 4.0 cubic inches to 78.5 cubic inches water capacity; 0.625 inches to 2.0 inches outside diameter; and 36 inches to 72 inches in length.

b. Cylinders must be shipped UN 4C1., 4C2 or 4D the wooden boxes and as prescribed in 49 CFR 173.301(k).

c. The charge pressure may not exceed 45 psig at 130 degrees F. The ratio of design burst pressure to charge pressure at 130 degrees F. must be greater than 100:1.

d. Each cylinder must be pressure tested and shown to have no leakage at 1000 psig for at least one hour.

e. Maximum permitted filling density at 70 degrees F. is 85 percent.

f. Rupture discs must be rendered non-functional in transportation by installation of shipping plugs.

g. Each wooden box must be marked "DOT-E 10359".

h. Each cylinder used for the transportation of bromine trifluoride must be marked "INHALATION HAZARD" near the required labels.

8. SPECIAL PROVISIONS.

a. Persons who receive the packages covered by this exemption may reoffer them for transportation provided no modifications or changes are made to the packages, all terms of this exemption are complied with and a current copy of this exemption is maintained at each facility from which such reoffering occurs.

b. Each wooden box must have the OXIDIZER, POISON and CORROSIVE labels applied.

c. Persons using the packaging covered by this exemption must comply with all the shipping paper, marking, labeling, and placarding requirements of 49 CFR Part 172 for materials poisonous by inhalation.

d. This exemption also constitutes the approval of the competent authority of the United States for shipment of bromine trifluoride on cargo aircraft pursuant to State Variation US 3 and Special Provision A2 of the International Civil Aviation Organization (ICAO) Technical Instructions.

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