U.S. Department
of Transportation

**Research and
Special Programs
Administration**

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

APR 3 - 1992

DOT-E 10678
(FIRST REVISION)

1. The National Aeronautics and Space Administration (NASA), Washington DC, is hereby granted an exemption from certain provisions of this Department's Hazardous Materials Regulations to offer for transportation in commerce the package prescribed herein containing the isobutane subject to the limitations and special requirements specified herein. This exemption authorizes the shipment of Isobutane in a non-DOT specification container which is part of a Solar, Anomalous & Magnetic Particle Explorer (SAMPEX Assembly), and provides no relief from any regulation other than as specifically stated.

2. BASIS. This exemption is based on NASA's application dated December 24, 1991 and supplemental information dated January 24 and February 25, 1992, submitted in accordance with 49 CFR 107.103 and the public proceeding thereon.

3. HAZARDOUS MATERIALS (Descriptor and class). Isobutane, classed as flammable gas.

4. PROPER SHIPPING NAME (49 CFR 172.101). Isobutane or Liquefied Petroleum gas.

5. REGULATION AFFECTED. 49 CFR 173.304(a)(1), and 173.304(d)

6. MODES OF TRANSPORTATION AUTHORIZED. Motor vehicle.

7. SAFETY CONTROL MEASURES.

(a) The package prescribed is a Solar, Anomalous & Magnetic Particle Explorer (SAMPEX Assembly) containing a non-DOT specification filament wound composite cylinder, SAMPEX TANK, having a capacity of 898.25 cubic inches and a marked service pressure of 300 psig. The SAMPEX TANK is filled with 17 pounds of 100% liquid Isobutane (0.55 specific gravity).

(b) The SAMPEX TANK must be designed, fabricated and tested per requirements in the NASA Goddard Space Flight Center's Specification NO: S-740-90-976, dated May 1990, and in accordance with the Structural Composite Industries' drawings numbered 5000691 thru 5000698 and 5000701, dated August 17, 1991, submitted to and on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA).

(c) Each SAMPEX TANK must be proof tested to 155 psig.

(d) The SAMPEX TANK is mounted as part of the SAMPEX assembly as shown in NASA Goddard Space Flight Center's drawings No. 1499685 (sheets 1 through 9) dated November 25, 1991, on file with OHMEA. The assembly must be mounted on a wheeled cart and be shipped in accordance with the SAMPEX MISSION SHIPPING ASSEMBLY drawing on file with OHMEA.

(e) The shipments authorized in this exemption are:

(1) One shipment of Sampex Assembly, containing charged Sampex Tank as described in paragraphs (a) and (b), from NASA Goddard Space Flight Center, Greenbelt, Maryland to NASA Wallops Flight Facility, Wallops Island, Virginia, and return to NASA Goddard Space Flight Center, Greenbelt Maryland, and;

(2) The shipment of the above described package to Vandenberg Air Force Base, Vandenberg, California, from NASA Goddard Space Flight Center.

8. SPECIAL PROVISIONS.

a. A copy of this exemption must be carried aboard each motor vehicle, used to transport packages covered by this exemption.

b. Drivers must have been instructed as to necessary safeguards and proper procedures in the event of unusual delay, fire or accident.

c. Each package must be marked on two sides in letters at least two inches high on a contrasting background, "DOT-E 10678".

d. Motors carriers holding an "Unsatisfactory" safety rating, as assigned by the Office of Motor Carriers Federal Highway Administration, are prohibited from transporting materials or packages covered under the terms of this exemption.

9. REPORTING REQUIREMENTS. Any incident involving loss of packaging contents or packaging failure must be reported to the Associate Administrator, Hazardous Materials Safety as soon as practicable. (49 CFR 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.)

10. EXPIRATION DATE. October 31, 1992.

Issued at Washington, D.C.:

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(DATE)

Alan I. Roberts
Associate Administrator for
Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C. 20590. Attention: Exemptions Program.

Dist: FHWA.