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

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

APR 3 1998

DOT-E 10925
(SECOND REVISION)

EXPIRATION DATE: August 31, 1999

1. GRANTEES: Southern Air Transport, Miami, Florida, and U.S. Army Space and Strategic Defense Command, Huntsville, Alabama, as joint parties.

2. PURPOSE AND LIMITATION: This exemption authorizes the transportation in commerce of materials poisonous by inhalation by cargo aircraft only, between the Hawaiian Islands, subject to the requirements specified herein. 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 172.101 Column (9B) and 173.227(b)(2)(iii).

5. BASIS: This exemption is based on the application of Southern Air Transport dated Auguts 31, 1997, and supplemental letter dated September 2, 1997 from U.S. Army Space and Strategic Defense Command, Huntsville, Alabama submitted in accordance with 49 CFR 107.109.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous materials description/proper shipping name	Hazard Class or Division	Identification number	Packing Group
Dimethylhydrazine, unsymmetrical	Division 6.1	UN1163	I
Dinitrogen tetroxide, liquefied	Division 2.3	UN1067	NA

Pending Renewal

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7. PACKAGING AND SAFETY CONTROL MEASURES:

a. PACKAGING: The authorized packagings meet or exceed all packaging requirements for land and marine transportation and are described as follows:

i. A quantity of 51 gallons of Dimethylhydrazine, unsymmetrical, is authorized to be transported in a UN 1A1 stainless steel drum of 55 gallons capacity authorized by DOT-E 11077. The drum meets all requirements of 49 CFR 173.227, including the requirement for an outer drum, except that the closure is not required to be provided with a secondary cap seal as required by 49 CFR 173.227(b)(2)(iii). The UN 1A1 drum must be overpacked in a polyethylene leakproof outer drum manufactured to the requirements of DOT-E 9618. The outer drum has a 95 gallon capacity with a 27.5" removable threaded head. A stainless steel bulkhead feedthrough fitting must be mounted in the outer drum to allow for testing the vapor space within the outer drum for vapors of Dimethylhydrazine, unsymmetrical. The test fitting must be capped.

ii. A quantity of not more than 55 gallons of Dinitrogen tetroxide, liquefied, is authorized to be transported in a 200 gallon capacity fusion weld, type 304L stainless steel DOT Specification 110A500W multi-unit tank car tank. The multi-unit tank car tank must be equipped with two service valves that are protected by a gas-tight bonnet. The DOT 110A500W multi-unit tank car tank must be transported in a NASA designed leakproof overpack. The multi-unit tank car tank must be transported horizontally in the overpack, secured in a special cradle with a metal holding device. The overpack must be designed for a MAWP of 85 psi and closed with a gas-tight cover, bolted in place. The cover of the overpack must have a pressure gauge and valve attached. Access must be provided by the valve for testing the vapor space inside the overpack for the presence of Dinitrogen Tetroxide vapor.

b. TESTING

i. The inner drum for Dimethylhydrazine, unsymmetrical, must meet the test requirements for a UN 1A1 stainless steel drum. The drum must be tested at the Packing Group I level for liquids with a specific gravity of at least 1.2, and a hydrostatic test pressure of 550 kPa. The polyethylene outer drum must be a commercially available drum manufactured and tested to the requirements of DOT-E 9618.

ii. The inner packaging for Dinitrogen tetroxide must meet the test requirements for a DOT Specification 110A500W multi-unit tank car tank. The NASA designed overpack must have been pressure tested at 106 psi.

c. MARKING

i. Each outer drum and overpack must be plainly marked on the body, in letters two inches high on a contrasting background, "DOT-E 10925".

ii. The outer drum for the Dimethylhydrazine must be additionally marked on the body in letters two inches high on a contrasting background:

"DOT-E 9618 OVERPACK"
"INSIDE PACKAGING IS A DOT-E 11077 DRUM" and
"DIMETHYLHYDRAZINE, UNSYMMETRICAL"

Additionally, the lid of the outer drum must be marked with the above marking in letters one half inch high.

iii. The overpack for the oxidizer cylinder shall be additionally marked on the cover, in letters two inches high on a contrasting background:

"OVERPACK - INSIDE PACKAGING IS
DOT SPECIFICATION 110A500W"
and "DINITROGEN TETROXIDE, LIQUEFIED"

iv. All other marking and labelling requirements of the Hazardous Materials Regulations apply.

8. SPECIAL PROVISIONS.

a. This exemption only authorizes the transportation of the specified fuel and oxidizer by cargo aircraft only between the Hawaiian Islands, in accordance with the logistics flow plan submitted in the application. The authorized carrier is Southern Air Transport. The shipper, U.S. Army Space and Strategic Defense Command, Huntsville, Alabama, is responsible for compliance with packaging, handling and testing provisions. No relief of regulations is provided by this exemption for the highway or marine transportation segments of the logistics flow plan.

b. The different materials authorized by this exemption may not be transported in the same aircraft.

c. The return of unused fuel or oxidizer is authorized, using a reverse flow plan of logistics.

d. At all points of intermodal connection, the vapor space within the overpack for either propellant must be tested to determine that no release of vapor from the inner packaging has occurred, prior to the package being loaded on the next carrier.

9. MODES OF TRANSPORTATION AUTHORIZED. Cargo aircraft only.

10. MODAL REQUIREMENTS:

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

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. Section 5101 et seq:

- All terms and conditions prescribed in this exemption and the Hazardous Materials Regulations, Parts 171-180.
- Registration required by 49 CFR 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in 49 CFR 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 49 CFR 172.700 and 172.704.

No person may use or apply this exemption, including display of its number, when the 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. (49 CFR 171.15 and 171.16 apply to any activity undertaken under the authority of this exemption.) In addition, the holders of this exemption must inform the AAHMS, in writing, of any incidents involving the package and shipments made under the terms of this exemption.

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, 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.

Dist: FAA