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

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

JAN 2 1 2003

DOT-E 11856
(TENTH REVISION)

EXPIRATION DATE: December 31, 2004

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Arch Chemicals, Inc.
Norwalk, CT

(See Appendix A to this document for a list of additional grantees)

2. PURPOSE AND LIMITATION:

a. This exemption authorizes the transportation in commerce of certain hazardous materials described in paragraph 6 below, in non-DOT specification packagings consisting of satellite fuel and thermal transport systems. This exemption provides no relief from the Hazardous Materials Regulations (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.

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

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101, column(9b) in that the quantity limitations for cargo aircraft are waived when using containers meeting the requirements of this exemption and §§ 173.201, 173.226, 173.227 in that a non-DOT specification container is not authorized, except as specified herein.

5. BASIS: This exemption is based on the application of Arch Chemicals, Inc. dated November 26, 2002, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi-fication Number	Packing Group
Ammonia, anhydrous	2.3	UN1005	N/A
Compressed gas, toxic, flammable, corrosive, n.o.s.* (hydrazine, helium)	2.3	UN3305	N/A Hazard Zone C
Hydrazine, anhydrous	8	UN2029	I

*Satellites which contain a low-pressure helium charge and hydrazine, classed and described as "Compressed gas, toxic, flammable, n.o.s. (hydrazine and helium), Inhalation Hazard Zone C, Class 2.3, UN1953" and marked and labeled as such may be shipped under this exemption under the same terms and conditions that otherwise apply when the satellites contain only anhydrous hydrazine.

7. SAFETY CONTROL MEASURES: - PACKAGING - The packaging system must consist of a satellite incorporating a fuel system containing hydrazine fuel and a thermal transport system containing anhydrous ammonia meeting the following requirements:

a. Satellite fuel tank. Each satellite includes a fuel tank having a nominal capacity of not over 35 gallons containing fuel pressurized to not over 420 pounds pressure with helium. This tank is a spherical containment vessel designed, constructed and transported in such a manner that under ordinary conditions of transportation, a safety factor of 2.0 times or greater is maintained at all times during its transportation. The propulsion system tank must be designed to operate at a pressure of up to 420 psi. Each vessel must be proof pressure tested to at least 630 psi and have a design burst pressure of not less than 840 psi.

b. Thermal transport system. The satellite may also contain a thermal transport system containing anhydrous ammonia. This refrigerant is sealed into tubes which meet all design, construction and test criteria of DOT exemption 11725 except that each system is pneumatically tested to a pressure 1.5 times the vapor pressure of the lading at 104°F. In addition, this thermal transport system must meet the exception requirements of 49 CFR § 173.307(a)(4).

c. Transportation unit. For transportation under this exemption, satellites must be loaded within a specially designed transportation unit similar to a small freight container designed to carry one satellite each. This unit must be as described in the application filed by Olin Corporation on March 13, 1997.

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 modification or change is made to the package or its contents 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. This exemption serves as a Competent Authority Approval (**CA-9704003**) issued by the Associate Administrator for Hazardous Materials Safety, Research and Special Programs Administration of the United States Department of Transportation, in accordance with Part 1; Chapter 1, Paragraph 1.2 of the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI).

d. The hazardous materials listed below may accompany each satellite on the transportation vehicle being used (truck, plane or rail car). Any freight container, truck or plane used under this exemption for shipments within, from or to the United States must be in exclusive use service.

(1) Hydrogen, compressed, 2.1, UN1049, as authorized under DOT-E 11384;

(2) Hydrazine, anhydrous, 8, UN2029, in DOT-4BW type units as authorized under DOT-E 11173;

(3) Helium, compressed, 2.2, UN1046, in authorized DOT Specification cylinders;

(4) Air, compressed, 2.2, UN1002, in authorized DOT packaging (breathing air packs);

(5) Isopropanol, 3, UN1219, in DOT authorized metal drums;

(6) Gasoline, 3, UN1203, in DOT authorized metal drums;

(7) Battery-powered equipment (e.g., man lifts, fork lift trucks), 9, UN3171;

(8) Engines, internal combustion, 9, UN3166, utility vehicles;

(9) Petroleum products, n.o.s., 3, UN1268, (e.g., oils, greases and various similar supplies) needed for equipment associated with a satellite launch;

(10) Ammonia, anhydrous, liquefied, 2.3, 8, UN1005, conforming to the requirements of § 173.307(a)(4). None of the materials listed above in the packaging described may be included within the freight-container type transportation unit housing the satellite, except for the thermal transport unit containing ammonia, anhydrous, when shipped as a component of the satellite, as provided in paragraph 7(b).

(11) Cartridges, power device, 1.4C UN0276, conforming to the requirements of § 173.62.

e. MARKING - The transportation unit must be marked "DOT-E 11856".

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

10. MODAL REQUIREMENTS:

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

b. Carriage of persons without compliance with the passenger-carrying requirements of 14 CFR Part 121 is authorized in compliance with 14 CFR § 121.583 insofar as persons other than crew are authorized aboard the aircraft in compliance with § 121.583(a)(4)(iii).

c. Materials transported under this exemption may be transported on a cargo aircraft only if accompanied by escort personnel familiar with the properties of the chemical.

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.

    - 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 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. (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 in Washington, D.C.:

R. Ryan Paul

For Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

JAN 21 2003
(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.

Copies of this exemption may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/exemptions Photo reproductions and legible reductions of this exemption are permitted. Any alteration of this exemption is prohibited.

PO: ALB