

November 14, 2013



U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 14602
(SECOND REVISION)

EXPIRATION DATE: October 31, 2017

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Lockheed Martin Corporation
Littleton, CO
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of anhydrous ammonia in non-DOT specification packaging. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce. The safety analyses did not consider the hazards and risks associated with use as a component of a transport vehicle or other device or other uses not associated with transportation in commerce.
 - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Table Column (9B) in that anhydrous ammonia is forbidden on cargo aircraft; § 173.301 in that the non-DOT specification packaging is not fitted with a pressure relief device; and §§ 173.302a(a)(1) and 173.304a(a)(2) in that non-DOT specification packaging is not authorized except as specified herein.

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5. BASIS: This special permit is based on the application of Lockheed Martin Corporation dated October 21, 2013 submitted in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Ammonia, anhydrous	2.2/2.3*	UN1005	N/A, Hazard Zone D

* Division 2.3 for international transportation. Division 2.2 as an alternative when only domestic transportation is involved.

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification pressure vessel (heat pipe) described in the application for special permit on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD). The heat pipes are fabricated from aluminum (6061-T6, 6061-T0 or 6063-T6) and/or stainless steel (301 or 321). The heat pipes do not include valves or pressure relief. The heat pipes must be manufactured to MIL-STD-1522A, entitled "Standard General Requirements for Safe Design and Operation of Pressurized Missile and Space Systems". Welding must be in accordance with AWS D17.1 (Specification for Fusion Welding for Aerospace Applications" and Lockheed Martin specifications LAC-3865, LAC-3888 and LAC-3873. The heat pipes must meet the following minimum requirements:

- (1) Maximum expected operating pressure of 1,120 psig at 212°F.
- (2) Minimum design proof test pressure of 1,680 psig.
- (3) Minimum burst pressure of 4,480 psig.
- (4) Maximum volume is 240 in³.

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b. OPERATIONAL CONTROLS -

(1) The amount of anhydrous ammonia in each heat pipe must not exceed 1.2 kilograms.

(2) The filling density calculation prescribed in § 173.304 applies to the filling of heat pipes.

(3) Each heat pipe must be transported in a strong outside packaging designed in accordance with ASTM D6251 "Standard Specification for Wood-Cleated Panelboard Shipping Boxes".

(4) The heat pipes may not be charged to a pressure exceeding 2,000 psig.

c. TESTING - Each heat pipe must be proof pressure tested to at least 1.5 times the maximum working pressure.

d. Emergency response information provided with the shipment, and available via an emergency response telephone number, must identify those receptacles that are not fitted with pressure relief devices, and provide appropriate guidance for exposure to fire.

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

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

c. Heat pipes authorized under this special permit are only authorized to support aerospace (satellite) and military applications.

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

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10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft, or motor vehicle used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit 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 special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
 - o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - 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 special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

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

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

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12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

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

PO: BMOORE:TG