

December 7, 2011



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 14897
(FIRST REVISION)

EXPIRATION DATE: October 31, 2015

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: AMKO Service Company
Midvale, OH
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of certain Division 2.1 and 2.2 materials in DOT Specification 3A, 3AA, 3AX, 3AAX and 3T cylinders having a water capacity over 125 lbs that are periodically requalified every ten years instead of every five years. The cylinders must be horizontally mounted on a motor vehicle (trailer chassis) or in an ISO frame or other framework of equivalent structural integrity. 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 development of this special permit only considered the hazards and risks 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 § 180.209(a) and part of § 180.209 (b), in that cylinders with a capacity over 125 lbs that may be requalified every ten years and they are not required to removed from bundles (tube trailers) or frames and hammer tested prior to each refill;

December 7, 2011

and § 180.209(b)(1)(iv) in that the combination of acoustic emission and ultrasonic examination (AE/UE) is authorized in lieu of hydrostatic testing and visual inspection.

NOTE: This does not relieve the holder of this special permit from securing an approval for retesting cylinders from the Associate Administrator for Hazardous Materials Safety.

5. BASIS: This special permit is based on the application of AMKO Service Company dated October 31, 2011, 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
Air, compressed	2.2	UN1002	N/A
Argon, compressed	2.2	UN1006	N/A
Compressed gas, flammable, n.o.s.	2.1	UN1954	N/A
Compressed gas, n.o.s.	2.2	UN1956	N/A
1,1-Difluoroethylene or Refrigerant gas R 1132a	2.1	UN1959	N/A
Helium, compressed	2.2	UN1046	N/A
Hexafluoroethane or Refrigerant gas R 116	2.2	UN2193	N/A
Hydrogen, compressed	2.1	UN1049	N/A
Neon, compressed	2.2	UN1065	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Nitrogen trifluoride, compressed	2.2	UN2451	N/A

December 7, 2011

Hazardous Materials Description			
Proper shipping name	Hazard Class/ Division	Identification Number	Packing Group
Nitrous oxide	2.2	UN1070	N/A
Oxygen, compressed	2.2	UN1072	N/A
Silane	2.1	UN2203	N/A
Sulfur hexafluoride	2.2	UN1080	N/A
Tetrafluoromethane or Refrigerant gas R 14	2.2	UN1982	N/A
Trifluoromethane or Refrigerant gas R 23	2.2	UN1984	N/A

7. SAFETY CONTROL MEASURES:

PACKAGING - Packaging prescribed are DOT 3A, 3AA, 3AX, 3AAX or 3T cylinders (tubes) mounted on a trailer chassis (tube trailers), or in an ISO frame or other framework of equivalent structural integrity (see § 173.301(i)), that are subjected to periodic requalification and marking specified in §§ 180.205, 180.209, and 180.213 except that:

(1) Each cylinder mounted in a frame or on the trailer chassis may be requalified every 10 years by utilizing the acoustic emission and ultrasonic examination (AE/UE) in accordance with DOT-SP 8944 (AMKO, Service Company). The 10 year requalification period applies only to cylinders that meet all requirements specified in § 180.209(b) except that the cylinders may have a water capacity over 125 lbs and they are not hammer tested.

(2) Every five years, each cylinder (tube) including the cylinder neck and flange/sleeve must be subjected to an external visual inspection (without disassembly) in accordance with CGA Pamphlet C-6. A cylinder with excessive corrosion around the neck or under the flange/sleeve must be removed and examined in accordance with the DOT procedure for inspection of

December 7, 2011

DOT/TC cylinder mounting threads listed on PHMSA website at:

<http://www.phmsa.dot.gov/hazmat/library/reports>

Cylinders mounted on saddle design units that do not have any flange are exempt from OD neck threads inspection. AMKO must record the results of the visual inspection for each cylinder or tube and submit the report to the Office of Hazardous Materials Special Permits and Approvals (OHMSPA) upon request.

b. OPERATIONAL CONTROLS -

(1) Prior to use of this special permit and once every 10 year, each cylinder's (tube's) neck flange/sleeve neck must be removed and the external neck threads must be inspected in accordance with DOT Inspection Procedure, listed on the PHMSA web site, <http://hazmat.dot.gov/enforce/forms/ohmforms.htm#guidance>.

(2) Before being used under the terms of this special permit, each DOT 3T cylinder (tube) must be subjected to shear wave ultrasonic examination (UE). The UE must be performed by an authorized DOT UE special permit holder or the cylinder (tube) manufacturer. Maximum acceptance defect (sidewall crack) for a tube that is tested by UE shear wave is 5% of the minimum design wall thickness of the tube. The UE shear wave must cover 100% of the sidewall of the cylinder.

(3) This special permit is limited to the DOT cylinders described in paragraph 7.a. above that are mounted horizontally on a motor vehicle (trailer chassis) or in an ISO frame or other framework of equivalent structural integrity mounted horizontally in a frame or on a trailer chassis. Flat bottom cylinders are not covered by this permit.

(4) Maximum cycling (fillings) of each cylinder (tube) in a 10 year period must be less than or equal to 600 for DOT 3A, 3AA, 3AX, 3AAX and 300 for DOT 3T cylinders. AMKO Service Company must record all fillings of each cylinder and submit the report to the OHMSPA upon request.

(5) All gases must have a dew point at or below minus 52°F at one atmosphere.

December 7, 2011

(6) Hydrogen and hydrogen bearing gases are not authorized in DOT 3T specification cylinders (see § 173.302a(a)(4)).

(7) Carbon dioxide or any corrosive gas in any concentration shall not be added to these cylinders.

(8) Maximum acceptance flaw size for the DOT 3T specification cylinder used for Silane service and requalified under this special permit using AE/UE must be 10% of the minimum design wall thickness of the cylinder(tube).

(9) Each tube (3A, 3AX, 3AA, 3AAX, 3T etc.) which is requalified under the terms of this permit (every 10-years) must undergo an internal visual inspection in accordance with CGA Pamphlet C-6.

(10) No person may perform inspection and testing of cylinders subject to this special permit unless:

(i) That person is an employee of AMKO Service Company and has a current copy of this special permit at the location of such inspection and testing, and

(ii) Complies with all the terms and conditions of this special permit.

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 modifications or changes are 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. MARKING:

(1) An exterior tube on each side of the bundle or ISO frame must be marked with letters and numbers at least 2 inches high on a contrasting background "DOT-SP 14897".

(2) The current retest date must be marked on the rear or side of the frame or the tube trailer at approximately eye level. In the event retest dates of cylinders differ in the frame or the tube trailer, the oldest retest date (meaning the date of the retest that must occur first) will be displayed.

d. Transportation of Division 2.1 (flammable gases) is not authorized aboard a cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).

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

December 7, 2011

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.

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: MMToughiry:dl