

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

Pipeline and Hazardous Materials Safety Administration

DOT-SP 6263 (FIFTEENTH REVISION)

EXPIRATION DATE: 2024-09-30

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Amtrol Inc.

West Warwick, RI

2. PURPOSE AND LIMITATION:

- a. This special permit authorizes the transportation in commerce of certain nonflammable gases in a non-DOT specification pressure vessel designed and constructed to the ASME Code. 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. Party status will not 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 §§ 173.302a(a)(1) in that a non-DOT specification cylinder is not authorized and 173.306(g) in that the water pump system may not be charged to greater than 40 psig, except as specified herein.

- 5. <u>BASIS</u>: This special permit is based on the application of Amtrol Inc. dated September 28, 2020 and submitted in accordance with § 107.109.
- 6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Air, compressed	2.2	UN1002	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Compressed gas, n.o.s. (Air with up to 15% helium)	2.2	UN1956	N/A
Compressed gas, n.o.s. (Nitrogen with up to 5% Hydrogen)	2.2	UN1956	N/A

7. SAFETY CONTROL MEASURES:

- a. PACKAGING: Prescribed packagings are non-DOT specification, non-refillable, welded, cylindrical or spherical steel pressure vessels designed for a maximum allowable working pressure (MAWP) of 125, 150, 175, 250 or 300 psig. Each tank must be constructed in accordance with Section VIII, Division 1 of the ASME Code and be ASME Code "U" stamped. A design margin of 3.5:1 is authorized. In addition:
 - (1) Each pressure vessel must be pressure tested by either the hydrostatic method at 1.3 times the MAWP or by the pneumatic method at 1.1 times the MAWP in accordance with the requirements of the ASME Code.
 - (2) Safety relief devices are not required for shipment, when the pressure vessel is charged to a pressure of not exceeding 60 psig at 70F.

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. The pressure vessels must be shipped in strong outside shipping container, crates, or on skids, designed to protect from damage any valves or projections from the tank under conditions normally incident to transportation.
- 9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle and rail freight.
- 10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle used to transport packages covered by this special permit.
- 11. <u>COMPLIANCE</u>: 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 <u>et seq</u>:
 - 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 \square 107.601 <u>et seq.</u>, when applicable.

Each "Hazmat employee", as defined in \square 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 $\square\square$ 172.700 through 172.704.

October 05, 2020

No person may use or apply this special permit, including display of its number, when the 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 William Schoonover

Ryan J Ving

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.

October 05, 2020

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: Andrew Eckenrode



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

Pipeline and Hazardous Materials Safety Administration

DOT-SP 10319 (ELEVENTH REVISION)

EXPIRATION DATE: 2022-03-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Amtrol Inc.

West Warwick, RI

2. PURPOSE AND LIMITATIONS:

- a. This special permit authorizes the manufacture, mark, sale and use of non-DOT specification pressure vessels (water pump system tank) for use in the shipment of Division 2.2 materials. This special permit provides no relief from any Hazardous Materials Regulation 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. In accordance with 49 CFR 107.107(a) party status may not be granted to a manufacturing permit. These packagings may be used in accordance with 49 CFR 173.22a.
- 3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
- 4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.302a(a)(1) and 173.306(g) in that non-DOT specification packages are not authorized except as specified herein.
- 5. <u>BASIS</u>: This special permit is based on the application of Amtrol, Inc., dated March 15, 2018, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Compressed gas	2.2	UN1956	N/A
Nitrogen compressed	2.2	UN1066	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a welded, non-DOT specification cylindrical pressure vessel (water pump system tank) designed for a working pressure of up to 150 psig. Pressure vessels are not ASME Code "U" stamped. However, each pressure vessel must be welded in accordance with Section IX of the ASME code. The following 42 Models and capacities are authorized:

Drawing Number	Model	Gals.		December No.	1 3 4 3 3	T
	·		l	Drawing Number	Model	Gals.
184-13	WX-421	165		183-36	WX-450	132
185-13	WX-422	220		184-34	WX-451	158
186-13	WX-423	275		185-34	WX-452	211
181-13	WX-424	325		186-34	WX-453	264
187-13	WX-426	440		181-34	WX-454	317
188-13	WX-427	550		182-34	WX-455	370
144-74	WX-401	17.5		187-34	WX-456	422
145-74	WX-402	25		188-34	WX-457	528
146-74	WX-403	34		184-43	ST-451	158
147-74	WX-404	68		185-43	ST-452	221
149-74	WX-405	90		186-43	ST-453	264
149-142	WX-406	110		181-43	ST-454	317
149-143	WX-407	132		182-43	ST-455	370
183-35	WX-447	53	İ	187-43	ST-456	422
183-34	WX-448	80		188-43	ST-457	528
183-33	WX-449	106		165-7	ST-35-L	10
166-7	ST-50-L	13		167-6	ST-85-L	22
168-6	ST-100-L	26		169-6	ST-130-L	34
171-17	ST-165-L	44		191-35	ST-200-L	53
192-33	ST-300-L	80		193-34	ST-400-L	106
194-34	ST-500-L	132		174-39	ST-600-L	158

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- b. Each pressure vessel must be pressure tested by either the hydrostatic method at 1.5 times the MAWP or by the pneumatic method at 1.25 times the MAWP in accordance with the requirements of the ASME Code.
- c. Safety relief devices are not required for shipment.
- d. Each pressure vessel must be shipped in a strong outside shipping packaging or crate, or shipped mounted on skids, designed to protect any valves from damage or projections from the pressure vessel under conditions normally incident to transportation.
- e. Charge pressure may not exceed 50 psig.
- f. The burst pressure of each pressure vessel must be at least 6 times the charge pressure at $70^{\circ}F$.
- g. The stress at prescribed test pressure may not exceed 20,000 psi using the formula:

S = Pd / 2t

Where:

S = wall stress in pounds per square inch;

P = prescribed test pressure for the tank of

at least 150 psig;

d = inside diameter in inches;

t = minimum wall thickness, in inches.

8. <u>SPECIAL PROVISIONS</u>:

- a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.
- b. A person who is not a holder of this special permit, but 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 offered for transportation in conformance with this special permit and the HMR.
- c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

April 18, 2018

- d. Each packaging manufactured under the authority of this special permit must be marked with a <u>registration symbol</u> designated by the Office of Hazardous Materials Safety Approvals and Permits Division <u>for a specific manufacturing</u> facility.
- e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.
- 9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel.
- 10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel used to transport packages covered by this special permit.
- 11. <u>COMPLIANCE</u>: 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 <u>et seq:</u>
 - 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 \text{ } \underline{\text{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

April 18, 2018

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.:

Chara Son

for William Schoonover

Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials 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: PTOlson/TD



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

Pipeline and Hazardous Materials Safety Administration

DOT-SP 11592 (ELEVENTH REVISION)

EXPIRATION DATE: 2024-07-31

(FOR RENEWAL, SEE 49 CFR 107.109)

1. <u>GRANTEE</u>: Amtrol International Inc. West Warwick, RI

2. PURPOSE AND LIMITATIONS:

- a. This special permit authorizes the manufacture, mark, sale and use of a non-DOT specification steel water pump system tank that exceeds the prescribed maximum outside diameter and wall stress used for the transportation in commerce of compressed air or nitrogen. 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. In accordance with 49 CFR 107.107(a) party status may not be granted to a manufacturing permit. These packagings may be used in accordance with 49 CFR 173.22a.
- 3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
- 4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.306(g) in that the water pump system may not be charged to greater that 40 psig, except as specified herein; § 173.306(g)(1) in that the outside diameter of each water pump system may not exceed 24 inches, except as specified herein; and

- \$ 173.306(g)(3) in that the maximum wall stress at the prescribed pressure may not exceed 20,000 psi, except as specified herein.
- 5. <u>BASIS</u>: This special permit is based on the application of Amtrol International Inc. dated August 10, 2020, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Air, compressed	2.2	UN1002	N/A
Compressed gas, n.o.s. (air with up to 15% helium)	2.2	UN1956	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Compressed gas, n.o.s. (nitrogen with up to 5% hydrogen)	2.2	UN1956	N/A

7. SAFETY CONTROL MEASURES:

- a. PACKAGING: Packaging prescribed is a water pump system tank constructed of ASTM 620 low carbon, aluminum killed, deep-drawn steel in accordance with AMTROL Inc. drawing nos. 147-144 Rev. B or 150-39 Rev. B; or constructed of ASTM A1008 Type DS, modified, cold rolled, aluminum killed drawing steel in accordance with AMTROL Inc. drawing nos. 102-001 Rev. K and 9406C240 Rev. C. Drawings must be on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD). Packagings must be in accordance with § 173.306(g) except as follows:
 - (1) \$173.306(g)(1) Applies except that the outside diameter may not exceed 26 inches.
 - (2) \$ 173.306(g)(3) For tanks less than or equal to 11 inches in diameter and manufactured in accordance with Drawing #'s 9406C240 Rev. C and 102-001, the

stress at the prescribed pressure must not exceed 38,000 psi; otherwise the stress at the prescribed pressure must not exceed 25,000 psi using the formula:

S = Pd/2t

Where:

S = wall stress in pounds per square inch;

P = prescribed pressure for the tank of at least 3 times charged pressure at 70°F or 100 psig, whichever is greater;

d = inside diameter in inches;

t = minimum wall thickness, in inches.

- (3) \S 173.306(g)(4) The burst pressure must be at least 8 times the charge pressure at 70°F.
- (4) § 173.306(g) Applies except the compressed air may contain up to 15% compressed helium. Tanks less than or equal to 11 inches in diameter and manufactured in accordance with 9406C240 Rev. C and 102-001 Rev. K must not be charged over 70 psig. For tanks manufactured in accordance with drawings 147-144 Rev. B or 150-39 Rev. B the tank must not be charged to over 50 psig.

8. SPECIAL PROVISIONS:

- a. In accordance with the provisions of Paragraph (b) of \$173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.
- b. A person who is not a holder of this special permit, but 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 offered for transportation in conformance with this special permit and the HMR.
- c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

- d. Each packaging manufactured under the authority of this special permit must be either (1) marked with the <u>name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by OHMSAPD for a specific manufacturing facility.</u>
- e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.
- f. MARKING: Packages are exempt from marking and labeling requirements except that the name of contents must be marked on the outside packaging. In addition, each packaging manufactured under the authority of this special permit must be plainly and durably marked "DOT-SP 11592".
- 9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, and cargo vessel.
- 10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel or motor vehicle used to transport packages covered by this special permit.
- 11. <u>COMPLIANCE</u>: 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 <u>et seq</u>:
 - 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 $\underline{\text{et seq.,}}$ 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.

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 William Schoonover

Ryan J Ving

Associate Administrator for Hazardous Materials Safety

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

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PO: Andrew Eckenrode



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 14457 (ELEVENTH REVISION)

EXPIRATION DATE: 2020-12-31

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Amtrol Alfa Metalomecanica, SA

Guimares, Portugal

(U.S. Agent: Amtrol Inc., West Warwick, RI)

2. PURPOSE AND LIMITATION:

- a. This special permit authorizes the manufacture, marking, sale and use of a non-DOT specification fully-wrapped fiberglass composite cylinder with a welded carbon steel liner for the transportation in commerce of the materials authorized by this special permit. 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.
- 3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
- 4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.304a(a)(1), 180.207(a)(3), and 178.71 in that a non-DOT specification cylinder and service life beyond 15 years are not authorized except as specified herein.

NOTE: This does not relieve the grantee of this special permit from securing and maintaining a valid approval for the foreign manufacture of cylinders from the Associate Administrator for Hazardous Materials Safety.

- 5. <u>BASIS</u>: This special permit is based on the application of Amtrol Alfa Metalomecanica, SA, dated January 04, 2017, submitted in accordance with § 107.109.
- 6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Butane <i>see also</i> Petroleum gases, liquefied	2.1	UN1011	N/A
Compressed gas, flammable, n.o.s.	2.1	UN1954	N/A
Hydrocarbon gas mixture, liquefied, n.o.s.	2.1	UN1965	N/A
Liquefied gas, flammable, n.o.s.*	2.1	UN3161	N/A
Petroleum gases, liquefied <i>or</i> Liquefied petroleum gas	2.1	UN1075	N/A
Propane see also Petroleum gases, liquefied	2.1	UN1978	N/A
Dichlorodifluoromethane or Refrigerant gas R12	2.2	UN1028	N/A
Chlorodifluoromethane <i>or</i> Refrigerant gas R22	2.2	UN1018	N/A
1,1,1,2-Tetrafluoroethane <i>or</i> Refrigerant gas R134a	2.2	UN3159	N/A
Liquefied gas n.o.s.*	2.2	UN3163	N/A

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Helium, compressed	2.2	UN1046	N/A
Compressed gas, n.o.s.*	2.2	UN1956	N/A
Refrigerant gas R404A*	2.2	UN3337	N/A
Refrigerant gas R407A*	2.2	UN3338	N/A
Refrigerant gas R407B*	2.2	UN3339	N/A
Refrigerant gas R407C*	2.2	UN3340	N/A
Chlorodifluoromethane and chloropentafluoroethane mixture or Refrigerant gas R502*	2.2	UN1973	N/A

^{*}Technical name required

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification, fully-wrapped fiberglass composite cylinder with a welded carbon steel liner. Cylinders must be designed, manufactured, and tested in accordance with the design and construction requirements for UN Composite Cylinders specified in § 178.71(1)(ii), ISO 11119-2 standard, except as detailed below and with Amtrol Alfa Metalomecanica, SA's specification and drawings on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA). Additionally, cylinders must be in conformance with the following:

(1) Type size and service pressure.

Maximum Volume: 24 Liters (6.3 Gallons);

Maximum service pressure: 28 bars (406 psi);

Minimum test pressure = $1.5 \times \text{service}$ pressure up to a maximum of 42 bars (609 psig);

Minimum burst pressure: 2 x test pressure

(2) Materials.

Liner - Liner material must be in accordance with ASTM-A1008/A1008M-01a ("Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability"). The material has the following chemical composition:

Element	Weight %
Carbon	0.10 (max)
Manganese	0.50 (max)
Phosphorous	0.25 (max)
Sulfur	0.035 (max)
Aluminum	0.010 (max)

Filament material - a mono component glass fiber in a polypropylene matrix in accordance with ISO 11119-2.

(3) Design and Manufacture.

The liner must be designed, manufactured and tested in accordance with the requirements of Amtrol Alfa Metalomecanica, SA specification and drawings on file with the OHMSPA.

- The liner must have a minimum burst pressure greater than or equal to the test pressure. For example for a cylinder with 28 bar service pressure, the liner's burst pressure ≥ 42 bars.
- Welding procedures and welder qualification must be in accordance with CGA pamphlet C-3 or ISO standards 15614-1, 9606-1 and 14732.

All other design testing and manufacturing processes of the composite cylinder must be in accordance with ISO 11119-2 and additional testing described herein.

(4) Batch (Lot) Inspection and Testing.

All batch testing and inspection must be in accordance with ISO 11119-2 except as noted in paragraph 7.a.(2).

(5) Design qualification tests.

Prior to initial shipment of any specific cylinder design, qualification tests must have been performed on representative cylinders with satisfactory results. All cylinders used for design qualification tests must be fabricated on the same equipment and subjected to the same processes as is used to produce cylinders intended for charging and shipment. All tests must be witnessed by DOT approved independent inspector agency (IIA). Test reports must be kept on file by the cylinder manufacturer and made available to the IIA and the Office of Hazardous Materials Safety upon request. Required testing for design changes must be as specified in ISO 11119-2.

(6) Flawed Tolerance Test.

Two completed cylinders shall be prepared for performing flawed tolerance test. Each cylinder shall have two cuts into the composite side-wall. One cut shall be longitudinal and the other transverse. The size of each must be as described herein:

- Width = 1mm, length = 5 times the composite thickness, depth = at least 40% of the composite thickness.
- One flawed cylinder shall withstand the ambient pressure cycling test to 5000 pressure cycles to 2/3 times test pressure without leaking;
- Second flawed cylinder shall withstand the burst test to at least 4/3 times the test pressure;
- Test reports must be kept on file by the cylinder manufacturer and made available to the IIA and the OHMSPA.

(7) Pressure relief devices and valve protection.

Each cylinder must be equipped with a pressure relief device in accordance with § 173.301(f). Protection for valves and other connections must be in accordance with § 173.301(h).

(8) Drop Test.

Drop test must be in accordance with ISO 11119-2, referenced in § 178.71. Visual damage shall be noted after each drop. No repairs to the cylinder or repair/replacement of outer plastic casing (OPC) shall be made during the drop test.

- b. $\underline{\text{MARKING}}$: Each cylinder must be permanently marked "DOT-SP 14457" on the exterior surface.
- REQUALIFICATION Periodic inspection and testing must c. be conducted in accordance with the procedure described in \$180.207 for ISO 11119-2 cylinders, except as noted below. The retester must hold a valid DOT RIN. During retesting the outer plastic casing shall not be removed. Each cylinder must be given an external visual inspection as follows: Any cylinder with damage to the outer plastic casing which exposes the composite shell must be rejected. A cylinder that has been exposed to fire or that shows exterior degradation due to exposure to chemicals must be rejected. External cylinder damage must be evaluated in accordance with the criteria detailed Amtrol "In Service Inspection of Amtrol CoMet Cylinders" document in Attachment A of this special permit and on file with OHMSPA. Cylinders inspected in accordance with sections 7c.(1) and (2) below must be given an internal visual inspection as follows: Retesters must inspect for internal defects (e.g. isolated pits, cracks) in accordance with CGA Pamphlet C-6 (Standards for Visual Inspection of Steel Compressed Gas Cylinders). Cylinders must be requalified in accordance with one of the following options:
 - (1) Each cylinder must be retested at least once every five (5) years using a hydraulic proof pressure test equal to 1.5 times the marked service pressure. The test pressure must be held for a minimum of 3 minutes without any loss of pressure. Prior to performing the hydrostatic pressure test, each cylinder must be subjected to external and internal visual inspections as described above; or,

- (2) Each cylinder must be retested at least once every five (5) years using an external visual inspection and an internal visual inspection as described above. The internal visual inspection must be performed using a borescope; or,
- (3) In accordance with § 180.209(g), cylinders used in LPG gas service that meet the requirement limits in Table 1 of ASTM D-1835, "Standard Specification for Liquefied Petroleum (LP) Gases", must be retested once every five (5) years using external visual inspection only as described above.

d. OPERATIONAL CONTROLS -

- (1) Cylinders manufactured under this special permit are not authorized for use 15 years from the date of manufacture, except as specified under paragraph 8.a. of this special permit.
- (2) Filling requirements are subject to all terms contained in §§ 173.304 and 173.304a for DOT 4BA specification cylinders. Persons refilling cylinders authorized by this special permit must follow manufacturer's recommendations for pre-fill inspections.
- (3) A cylinder that has been subjected to fire may not be returned to service.
- (4) Cylinders must be packaged in accordance with the requirements in $\S 173.301(a)(9)$.
- (5) Cylinders may not be used for underwater breathing purposes.
- (6) Recovery gas cylinders must only be used in dedicated service and must be clearly marked "RECOVERY CYLINDER".

8. SPECIAL PROVISIONS:

a. Service Life Extension Program.

(1) Amtrol Alfa Metalomecanica may proceed in extending the service life of certain lot of cylinders in accordance with the service life extension program,

dated August 9, 2010 on file with OHMSPA. The program must be successfully completed for each designated design type prior to extending cylinder service life from 15 years to 30 years.

- For those designated design type cylinder, Amtrol must randomly recall a minimum of thirty cylinders of each design type which have been in service for 10 and 13 years. Cylinders recalled after 10 years shall be designated "Group A" and cylinders recalled after 13 years shall be designated "Group B". All recalled cylinders must meet the design qualification testing and requirements as specified in ISO 11119-2, Section 8. All cylinders that fail to meet the design qualification requirements must be condemned, removed from service and rendered incapable of retaining pressure. In the case that some units from the initial minimum lot size are condemned, an additional 30 cylinders must be selected and subjected to all design qualification and testing of ISO 11119-2. These 30 cylinders constitute a batch for additional testing. The cylinders must be tested in accordance with Sections 8.5.4, 8.5.5, 8.5.7 and 8.5.8 of ISO 11119-2. An Independent Inspector must witness all tests. Acceptance criteria shall be as defined in ISO 11119-2 except $P_b = 1.8P_h$ and the design life (y) must be greater than or equal to 20 years.
- (3) The complete test report including original test data must be submitted to the Associate Administrator for Hazardous Materials Safety for assessment within 30 days of completion. Failure to meet the acceptance criteria specified in Service Life Extension Program shall result in the design being restricted to a maximum life of 15 years.
- (1) In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

- (2) A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered for transportation in conformance with this special permit and the HMR.
- (3) A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.
- (4) Each packaging manufactured under the authority of this special permit must be either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.
- (5) A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.
- 9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and 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 current copy of this special permit to the air carrier before or at the time the shipment is tendered.
- 11. <u>COMPLIANCE</u>: 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 <u>et seq</u>:
 - 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 $\underline{\text{et seq.}}$, 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.

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 William Schoonover

C Vara By

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: BrMoore/SGREY



Recommended inspection prior to filling of Amtrol CoMet propane cylinder (DOT-SP 14457 and TC SU9768)

To ensure an Amtrol CoMet (Composite/Steel) cylinder is acceptable for filling or refilling the following steps should be performed:

- Inspect the cylinder to ensure that the required permanent markings are on the cylinder.
- 2) Check these markings for the retest date/ next required five-year inspection. If the cylinder is beyond the retest date it must be recertified prior to filling. If the cylinder manufacture date is more than 15 years old, the cylinder must be taken out of service.
- 3) Visually inspect the cylinder's protective plastic jacket for evidence of damage, including cuts, cracks, and gouges creating sharp edges or penetration of the outer jacket. Additionally, look for evidence of melting, over-pressurization or chemical damage, including charring, distortion or bulging. If any of this damage is observed, the cylinder must be pulled from service. Repair of the cylinder is not authorized. (Refer to In Service Inspection of Amtrol CoMet Cylinders)
- 4) Once the pre-fill inspection has been completed the cylinder can be filled/refilled.

Filling requirements are subject to all terms contained in sections 173.304 and 173.304a for DOT 4BA cylinders.

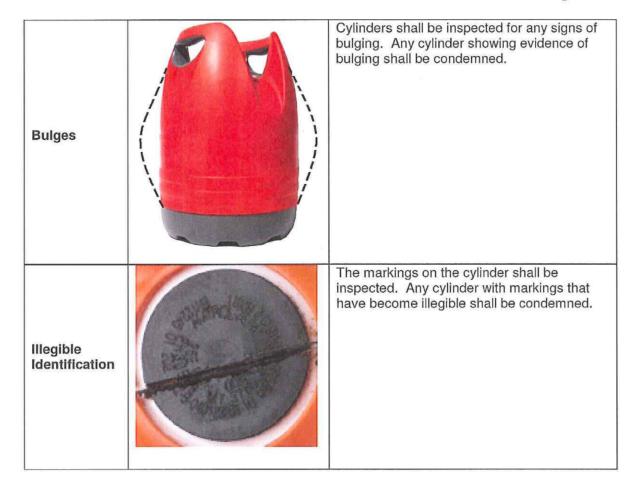
A current copy of this special permit must be maintained at each facility where the package is offered for transportation.

This can be obtained at www.phmsa.dot.gov/hazmat and click on Special Permits and Approvals.

In Service Inspection of AMTROL CoMet Cylinders

Type of Damage	Photo Example	Description of Damage
Abrasion		Cylinders shall be inspected for abrasion damage. Minor abrasion damage to the protective outer jacket that does not affect the integrity or the ease of handling is acceptable. Any cylinder that shows evidence of major abrasion damage that creates sharp edges on the outer jacket, fully penetrates the outer casing, or decreases its integrity shall be condemned.
Impact		Cylinders shall be carefully inspected for impact damage. Any cylinder that shows evidence of impact damage that creates sharp edges on the outer jacket, fully penetrates the outer casing, or decreases its integrity shall be condemned.

Heat or Fire	galpyi	Cylinders shall be carefully inspected for evidence of exposure to fire or overpressurization, including bulging. Any cylinder showing evidence of heat, fire or overpressurization damage, including but not limited to discoloration, charring, distortion, bulging or melting shall be condemned.
Chemical Damage		Cylinders shall be carefully inspected for evidence of exposure to aggressive chemicals. Any cylinder showing discoloration, dissolved plastic, or any other sign of chemical attack shall be condemned.
Cuts and Gouges		Cylinders shall be carefully inspected for cuts and gouges. Any cylinder with a cut or gouge that fully penetrates the protective outer jacket shall be condemned.





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

Pipeline and Hazardous Materials Safety Administration

DOT-SP 14808 (FIFTH REVISION)

EXPIRATION DATE: January 31, 2020

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Amtrol-Alfa, Metalomecanica S.A.

Guimaraes, Portugal

(U.S. Agent: Amtrol Inc., West Warwick, RI)

2. PURPOSE AND LIMITATIONS:

- a. This special permit authorizes the manufacture, marking, sale and use of non-DOT specification cylinders, similar to a DOT 4BA, except as specified herein, for the transportation in commerce of the materials authorized by this special permit. 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. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.
- 3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171- 180.
- 4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 178.51(b), (f)(1) and (2) and (g) in that the use of a non-DOT specification cylinder is not authorized, except as specified herein.

February 4, 2016

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

5. <u>BASIS</u>: This special permit is based on the application of Amtrol-Alfa Metalomecanica, S.A. dated March 2, 2015 and additional information dated April 13, 2015 submitted in accordance with § 107.105 and the public proceeding thereon and additional information submitted on April 13, 2015.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Material Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Butane see also Petroleum gases, liquefied	2.1	UN1011	N/A
Petroleum gases, liquefied or Liquefied petroleum gas	2.1	UN1075	N/A
Propane see also Petroleum gases, liquefied	2.1	UN1978	N/A
Liquefied gas, flammable, n.o.s., (2,3,3,3-Tetrafloroprop-1-ene; also known as HFO-1234yf)	2.1	UN3161	N/A

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification cylinder, similar to the DOT-4BA that have a maximum water capacity of 35.8 liters (9.5 US gallons). The maximum service pressure is 240 psig and the minimum cylinder burst strength is 960 psig. The cylinders are constructed in accordance with the Amtrol Alfa application for special permit, drawing number X-036-02-0003, specification and design qualification testing, on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA) and in accordance with § 178.51 except as follows:

§ 178.51(b) Steel

The steel composition is limited to the high strength,

February 4, 2016

dual phase, deep draw quality, killed, low carbon type with all of the chemical properties of the Grade 1 steel as presented in Appendix A of Part 178 except that the maximum silicon content must not exceed 0.50%. The chemical analysis must conform to the following:

Element	Ladle Analysis %
Carbon	0.20 (max)
Manganese	1.60 (max)
Phosphorous	0.04 (max)
Sulfur	0.05 (max)
Silicon	0.50 (max)*
Copper	0.40 (max)

*Note: The maximum silicon content has been increased from 0.30%, shown in Table 1 of Appendix A in Part 178, to 0.50%.

The guaranteed minimum yield strength must be at least 79,700 psig and the minimum guaranteed tensile strength must be at least 101,500 psig.

§ 178.51(f) Wall thickness

The maximum wall stress in the cylinder at test pressure is calculated by the equation given in \$ 178.51(f)(2), and may not exceed a value equal to half of the guaranteed minimum tensile strength.

§ 178.51(g) Heat Treatment

Heat treatment is not required.

b. QUALIFICATION TESTING -

(1) For each new design a minimum of two cylinders must successfully pass a drop test onto an edged striker from a height of 1.2 meters (3.9 feet) in accordance with the documentation provided by Amtrol-Alfa Metalomecanica, S.A. to the Office of Hazardous Materials Special Permits and Approvals (OHMSPA). A minimum of one cylinder must also successfully complete a 12,000 cycle pressure cycling test; with full pressure cycles ranging between 0 to 435 psig. The remaining cylinders must successfully pass a post-drop burst test; and bursting at no less than 90% of the

February 4, 2016

minimum guaranteed burst strength.

(2) In lieu of providing results for specimen elongation in accordance with § 178.51(k), a 12,000 cycle pressure cycling test must be conducted on 1 cylinder from every lot of 1000 cylinders of the same heat. If the lot of cylinders is from multiple heats, then additional cylinders must be selected to complete the test.

c. REQUALIFICATION TESTING -

- (1) Cylinders must be requalified once every 5 years in accordance with ISO 10460, "Welded carbon steel gas cylinders periodic testing and inspection".
- (2) Alternatively, in lieu of the above testing, the cylinders may be requalified by external visual inspection every five years in accordance with CGA Pamphlet C-6. To qualify for this testing option, the cylinders must be used in service for Liquefied Petroleum Gas that meets the detailed requirement limits in Table-1 of ASTM D 1835, "Standard Specification for Liquefied Petroleum (LP) Gases" or an equivalent standard containing the same limits.
- d. OPERATIONAL CONTROLS Amtrol-Alfa Metalomecanica, S.A. must submit, on an annual basis, all compiled results from the 12,000 cycle pressure cycling test to OHMSPA for the first two years of production.

8. SPECIAL PROVISIONS:

- a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.
- b. A person who is not a holder of this special permit, but receives a packaging covered by this special permit, may reoffer it for transportation provided no modification or change is made to the packaging and it is offered for transportation in conformance with this special permit and the HMR.
- c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered

for transportation.

- d. Since a puncture test and a post-puncture leakage test have been performed, outer packaging, as stipulated in § 173.301(a)(9), is not required.
- e. Each packaging manufactured under the authority of this special permit must be either (1) marked with the <u>name of the manufacturer and location (city and state) of the facility at which it is manufactured</u> or (2) marked with a <u>registration symbol</u> designated by the Office of Hazardous Materials Special Permits and Approvals <u>for a specific manufacturing facility</u>.
- f. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.
- 9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, cargo vessel, and rail freight.
- 10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle or cargo vessel used to transport packages covered by this special permit.
- 11. <u>COMPLIANCE</u>: 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 <u>et</u> 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 $\underline{\text{et seq.}}$, 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.

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 -- OHMSPA, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:

Dank By

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: MT/SG

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February 4, 2016



Pipeline and Hazardous
Materials Safety Administration

East Building, PHH – 32

1200 New Jersey Avenue, Southeast

Washington, D.C. 20590

02/05/2016

Expiration Date: 02-05-2021

Mr. David Beretta III
Principal Engineer
AMTROL Inc.
1400 Division Road
West Warwick, RI 02893 United States

Dear Mr. Beretta III:

In response to your letter of 01-29-2016, the registration number **M1001** is assigned to AMTROL Inc., located at 1400 Division Road, West Warwick, RI. This symbol may be used in place of the packaging manufacturer's name and address, as authorized under provisions of Part 178 of the Hazardous Materials Regulations (49 CFR Parts 171-180).

This symbol may be used to mark packagings manufactured at the location identified in this letter only.

In addition to the marking of packagings under the provision of Section 178.503 of 49 CFR, the following conditions must be met:

- 1. For packagings manufactured or tested at other locations, a separate M number is required for identification purposes.
- 2. You must notify this office of any change in facility name, address, or management within 20 days of the change.

Sincerely,

For Dr. Magdy El-Sibaie

Associate Administrator for Hazardous Materials Safety

Suare M. Cassidy

Tracking Number: 2016020187



Pipeline and Hazardous Materials Safety Administration East Building, PHH – 32
1200 New Jersey Avenue, Southeast
Washington, D.C. 20590

Page 1 of 2

November 18, 2016

Expiration Date: 11-18-2021

Mr. David Beretta III Principal Engineer AMTROL Inc. 1400 Division Road West Warwick, RI 02893 US

Dear Mr. Beretta:

In response to your request dated November 02, 2016, the Pipeline Hazardous Materials Safety Administration (PHMSA) is re-issuing registration number **M1144** which is hereby re-assigned to AMTROL Inc., located at 3200 Bullard Street, Paducah, KY. This symbol may be used in place of the packaging manufacturer's name and address, as authorized under provisions of Part 178 of the Hazardous Materials Regulations (49 CFR Parts 171-180).

This symbol may be used to mark packagings manufactured at the location identified in this letter only.

In addition to the marking of packagings under the provision of Section 178.503 of 49 CFR, the following conditions must be met:

- For packagings manufactured or tested at other locations, a separate M number is required for identification purposes.
- 2. You must notify this office of any change in facility name, address, or management within 20 days of the change.

Tracking Number: 2016113648

3. This approval, as revised, supersedes all previous versions.

Sincerely,

for William Schoonover

Les Benninghows 1

Acting Associate Administrator for Hazardous Materials Safety

Tracking Number: 2016113648

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION



HAZARDOUS MATERIALS CERTIFICATE OF REGISTRATION FOR REGISTRATION YEAR(S) 2018-2021

Registrant: AMTROL INC

ATTN: DAVID BERETTA III 1400 DIVISION ROAD W WARWICK, RI 02893

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

Reg. No: 061318003003AC Effective: July 1, 2018 Expires: June 30, 2021

HM Company ID: 4997

Record Keeping Requirements for the Registration Program

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

- (1) A copy of the registration statement filed with PHMSA; and
- (2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, PHH-52, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington, DC 20590, telephone (202) 366-4109.