



U.S. Department
of Transportation

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

**Research and
Special Programs
Administration**

APR 16 2004

DOT-E 11670
(SIXTH REVISION)

EXPIRATION DATE: March 31, 2006

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Schlumberger-Oilphase
Dyce, Aberdeen, Scotland, United Kingdom
(Former Grantee: Schlumberger Oilphase, Division
of Schlumberger Evaluation and Production Services
(UK) Limited)
U.S. Agent: Oilphase Sampling Services, Ltd
Houston, Texas
2. PURPOSE AND LIMITATION:
 - a. This exemption authorizes the transportation in commerce of certain flammable gases in a non-DOT specification cylinder used for oil well sampling. 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 § 173.302a in that a non-DOT specification cylinder is not authorized, except as prescribed herein.
5. BASIS: This exemption is based on the application of Schlumberger-Oilphase dated April 6, 2004 submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101): **APR 16 2004**

Proper Shipping Name/ Hazardous Materials Description	Hazard Class/ Division	Identi- fication Number	Packing Group
Hydrocarbon gas mixture, compressed, n.o.s.	2.1	UN1964	N/A
Hydrocarbon gas mixture, liquefied, n.o.s.	2.1	UN1965	N/A

7. SAFETY CONTROL MEASURES:

- a. PACKAGING - Prescribed packaging is a non-DOT specification oil well sampling cylinder, threaded at one end, with a design pressure of 25,000 psig. Each cylinder must comply with the design calculations, drawings, material specifications, and engineering specifications submitted with Oilphase's application for exemption on file with the Office of Hazardous Materials Exemptions and Approvals (OHMEA). In addition, each cylinder must conform with DOT 3A Specification (§§ 178.35 and 178.36) except as follows:

§ 178.36(b) *Steel.*

Armco 17-4PH stainless steel double heat treated at 1150°F and conforming with Oilphase's Manufacturing Specifications MS 001 and MS 003 on file with OHMEA or Iconel 718 (UNS N07718) conforming with Oilphase Manufacturing Specification MAT018. Material must meet the requirements of the National Association of Corrosion Engineers (NACE) Specification MR-01-75 for suitability in hydrogen sulfide (H₂S) service.

§ 178.36(g) *Heat treatment.*

No heat treatment required for the completed cylinder.

§ 178.36(f) *Wall thickness.*

The wall stress at the minimum specified test pressure may not exceed 60 percent of the minimum tensile strength as determined from the physical tests required in § 178.36(k) and (l).

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§ 178.36(1) *Acceptable results for physical tests.*

17-4PH Stainless Steel

Minimum Tensile strength: 135,000 psi
Minimum Yield strength: 105,000 psi
Elongation: 16% on 1 inch gauge specimen

Inconel 718

Minimum Tensile strength: 170,000 psi
Minimum Yield strength: 125,000 psi
Elongation: 20% on 1 inch gauge specimen

§ 178.35(e) *Safety devices.*

No pressure relief device is required on the completed cylinder. Cylinder must be equipped with elastomeric seals that relieve pressure when subjected to a pool fire. The start to discharge pressure must not exceed the hydrostatic test pressure.

§ 178.35(f) *Marking.*

Applies except that cylinders must be marked "DOT-E 11670" in lieu of DOT Specification marking.

- b. TESTING - Each cylinder must be reinspected and hydrostatically retested in accordance with 49 CFR §§ 180.205 and 180.209 as prescribed for DOT 3A Specification cylinders. Reheat treatment or repair of rejected cylinders is not permitted.

c. OPERATIONAL CONTROLS -

(1) Each cylinder must be packed in the transportation box as specified in the application for exemption on file with the OHMEA.

(2) Emergency response information provided with the shipment and available via an emergency response telephone number must indicate that the receptacles are not fitted with pressure relief devices and provide appropriate guidance in case receptacles are exposed to fire.

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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. The cylinders are authorized for oil well sampling service only.

d. Transportation of Division 2.1 materials (flammable gases) is not authorized aboard 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, and cargo aircraft only.

10. MODAL REQUIREMENTS: A current copy of this exemption must be carried aboard each cargo vessel or aircraft used to transport packages covered by this exemption. The shipper must furnish a current copy of this exemption 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 exemption 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 exemption and the Hazardous Materials Regulations, 49 CFR Parts 171-180.

o Persons operating under the terms of this exemption 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.

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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 incidents involving the package and shipments made under the terms of this exemption.

Issued in Washington, D.C.:



for Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

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(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: DB/ss/sln