



**DEPARTMENT OF TRANSPORTATION
HAZARDOUS MATERIALS REGULATIONS BOARD
WASHINGTON, D.C. 20590**

Hazardous Materials Regulations Board

[49 CFR Parts 172, 173]

[Docket No. HM-29; Notice No. 69-21]

CARBON MONOXIDE IN MANIFOLDED CYLINDERS

Authorization of Shipments and Increased Filling Limitation

The Hazardous Materials Regulations Board is considering amending §§ 172.5, 173.301, 173.302, and 173.304 of the Department's Hazardous Materials Regulations to authorize shipments of carbon monoxide in manifolded cylinders, and to extend the filling limitation for carbon monoxide cylinders under specified conditions.

Interested persons are invited to give their views on this proposal. Communications should identify the docket number and be submitted in duplicate to the Secretary, Hazardous Materials Regulations Board, Department of Transportation, 400 Sixth Street SW., Washington, D.C. 20590. Communications received on or before September 30, 1969 will be considered before final action is taken on the proposal. All comments received will be available for examination by interested persons at the Office of the Secretary, Hazardous Materials Regulations Board, both before and after the closing date for comments.

Shipments of carbon monoxide in manifolded cylinders complying with specifications 3A, and 3AA, and having minimum service pressure of 2,400 p.s.i.g. have been made under the provisions of special permits for several years. Under these permits the pressure in the cylinder is limited to not over 1,000 pounds per square inch gauge at 70° F. except that cylinders are permitted to be charged up to 1,500 p.s.i.g. with dry and sulfur free gas. The regulations currently authorize shipments of carbon monoxide in these specification cylinders but do not permit charging of cylinders over 1,000 p.s.i.g. at 70° F., nor do they permit such cylinders to be manifolded. Increased pressure has been permitted on the basis that the corroding characteristics of the gas are mitigated when the gas is dry and sulfur free. There have been no reports of adverse experience registered with the Department in connection with shipments made under the terms of the permits.

This proposal would relocate the packaging requirements for carbon monoxide § 173.304 to § 173.302(f) because

this gas is not transported as a liquefied compressed gas as defined in § 173.301 (d). The manifolding provisions are set forth in § 173.301(d)(2). Changes to §§ 172.5 and 173.304 are made to coincide therewith.

In consideration of the foregoing, it is proposed to amend 49 CFR Parts 172 and 173 as follows:

I. Part 172 would be amended as follows:

(A) In § 172.5 paragraph (a), Commodity List, would be amended to read as follows:

§ 172.5 List of explosives and other dangerous articles.

(a) * * *

Article	Classed as—	Exemptions and packing (see sec.)	Label required if not exempt	Maximum quantity in 1 outside container by rail express
<i>Change</i>				
Carbon monoxide.	F.G.	173.306, 173.302	Red gas.	150 pounds.

II. Part 173 would be amended as follows:

(A) In § 173.301 paragraph (d)(2) would be amended to read as follows:

§ 173.301 General requirements for shipment of compressed gases in cylinders.¹

(d) * * *

(2) Manifolding is authorized for cylinders of the following nonliquefied gases: Boron trifluoride, carbon monoxide, ethylene, hydrogen, hydrocarbon gases, and methane, provided individual cylinders are equipped with approved safety relief devices as required by § 173.34(d) or § 173.315(i), and further provided that each cylinder is equipped with individual shutoff valve, or valves, which must be tightly closed while in transit. Manifold branch lines to these individual shutoff valves must be sufficiently flexible to prevent injury to the valves which otherwise might result from the use of rigid branch lines. A temperature measuring device may be inserted in one cylinder of a manifolded installation in place of the shutoff valve. Manifolded cylinders for carbon monoxide must have a minimum service pressure of 2,400 p.s.i.g., and the pressure of this gas in the cylinder must not exceed 1,500 p.s.i.g. at 70° F.

(B) In § 173.302 paragraph (f) would be added to read as follows:

§ 173.302 Charging of cylinders with nonliquefied compressed gases.

(f) *Carbon monoxide.* Carbon monoxide must be shipped in spec. 3A, 3AA, 3, or 3E (§§ 178.36, 178.37, 178.42 of this chapter) cylinders having minimum service pressure of 1,800 p.s.i.g. The pressure in the cylinder must not exceed 1,000 pounds per square inch gauge at 70° F. except that if the gas is dry and sulfur free then cylinders may be charged up to 1,500 p.s.i.g.

(C) In § 173.304 paragraph (a)(2) the table would be amended as follows:

§ 173.304 Charging of cylinders with liquefied compressed gas.

(a) * * *
(2) * * *

Kind of gas	Maximum permitted filling density (see note 1)	Containers marked as shown in this column or of the same type with higher service pressure must be used except as provided in § 173.34 (a), (b), § 173.301(j) (see notes following table)
<i>Cancel</i>		
Carbon monoxide.	DOT-3A1800; DOT-3AA1800; DOT-3; DOT-3E1800; The pressure in the cylinder must not exceed 1,000 pounds per square inch at 70° F

This proposal is made under the authority of sections 831-835 of title 18, United States Code, section 9 of the Department of Transportation Act (49 U.S.C. 1657), and Title VI and section 902(h) of the Federal Aviation Act of 1958 (49 U.S.C. 1421-1430 and 1472(h)).

Issued in Washington, D.C., on July 22, 1969.

C. P. MURPHY,
Rear Admiral, U.S. Coast Guard,
by direction of Commandant,
U.S. Coast Guard.

R. N. WHITMAN,
Administrator,
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Federal Aviation Administration.

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