

DEPARTMENT OF TRANSPORTATION

Research and Special Programs
Administration49 CFR Parts 171, 172, 173, 174, 176,
177, 178, and 179(Docket No. HM-115, Amdt. Nos. 171-74,
172-82, 173-166, 174-43, 176-17, 177-60,
178-77, and 179-32)Cryogenic Liquids; Final Rule
Corrections and Revisions; Delay of
Effective DateAGENCY: Materials Transportation
Bureau (MTB), Research and Special
Programs Administration, Department of
Transportation.ACTION: Final rule, corrections and
revisions.SUMMARY: This document makes
corrections and revisions to a final rule,
Docket HM-115, in Federal Register
Document 83-15211, beginning on page
27674 in the issue of Thursday, June 16,
1983, which amended the Hazardous
Materials Regulations (49 CFR Parts
171-179) by establishing requirements
for the transportation of specifically
identified cryogenic liquids.EFFECTIVE DATE: The effective date,
published in the Federal Register for
Amendment Nos. 171-74, *et seq.* (49 FR
27674) on June 16, 1983, is changed to
read "October 1, 1984". The corrections
and revisions in this document are also
effective October 1, 1984.FOR FURTHER INFORMATION CONTACT:
Hattie L. Mitchell, Office of Hazardous
Materials Regulation, 400 Seventh
Street, SW., Washington, D.C. 20590,
(202) 426-2075.SUPPLEMENTARY INFORMATION: On June
16, 1983, MTB published a final rule in
the Federal Register which amended the
Hazardous Materials Regulations to
establish requirements for the
transportation of certain cryogenic
liquids and also authorize the
transportation of certain gases that are
transported in cold liquid form. The final
rule carried an effective date of January
1, 1984, with voluntary compliance
authorized on and after September 15,
1983. A 90-day period for filing petitions
for reconsideration was provided in
place of the 30-day period specified by
49 CFR 106.35.MTB received 18 petitions. Several
commenters requested reconsideration
of the effective date, proper shipping
names and the identification numbers.
MTB believes that these issues warrant
immediate handling prior to publication
of the 1983 edition of Title 49, Code of
Federal Regulations, Parts 100-199.
Other issues raised in these and otherpetitions will be handled in a later
publication of the Federal Register in the
near future.In the final rule, MTB added several
new entries to the Hazardous Material
Table in § 172.101. The new cryogenic
liquid descriptions contain the
descriptor "cryogenic liquid" as part of
the proper shipping name. The
descriptions for other gases, such as
carbon dioxide, nitrous oxide, and
hydrogen chloride, which are
transported in cold liquid form, contain
the descriptor "liquid (*refrigerated*)".
The identification numbers for these
new descriptions are preceded by an
"NA" prefix.Unlike the international system for
describing gases, the compressed gas
descriptions for the atmospheric gases
and helium in 49 CFR 172.101 do not
include the word "compressed" in the
proper shipping name. A final rule
issued under HM-126A (45 FR 34560,
May 22, 1980) listed the identification
numbers for these compressed gases
preceded by a "UN" prefix. In the final
rule under HM-115, the prefix was
changed from "UN" to "NA" because
the descriptions in 49 CFR 172.101 are
not exactly the same as the
international descriptions.The changes made under HM-115 are
consistent with the premise under which
the numerical identification system was
adopted under HM-126A. In the NPRM
under HM-126A (44 FR 32976; June 7,
1979), MTB stated that identification
numbers would be preceded by "UN" if
the description preceding it is exactly
the same or sufficiently similar to the
international description and, if the
description in § 172.101 is significantly
different but addresses the same
material as a UN entry, it would be
given the same number but preceded by
"NA". The term "significantly different"
was intended to cover differences such
as the omission of words appearing in
an international description or the
addition of required words not
appearing in the international
description. The term "exactly the same
or significantly similar" was intended to
cover differences such as the singular
and plural forms in a description.Six commenters objected to the
"cryogenic liquid" and the "liquid
(*refrigerated*)" descriptors used in the
final rule. Four of these commenters
supported the international descriptor
"refrigerated liquid". Two other
commenters objected to the use of
"liquid (*refrigerated*)" and "refrigerated
liquid" in the shipping descriptions for
the cold form gases. One of these
commenters indicated a preference for
the descriptor "cold" or some otherappropriate term to describe these
gases.Commenters also objected to the
change to the "NA" prefix for
compressed gases. In its comments, the
Compressed Gas Association stated, in
part:Without Administrative Procedure Act
notice, HM-115 revised column (3A) in
Section 172.101 by assigning to these gases a
new identification number prefix NA, to
replace the UN prefix assigned in DOT
Docket HM-126A, May 22, 1980 (Display of
Hazardous Materials by Identification
Numbers: Improved Emergency Response
Final Rule). If DOT wishes to revise the
identification number prefix for the above
listed gases (to conflict with HM-126A), it
should publish a separate Notice of Proposed
Rulemaking, giving the public an opportunity
to comment.After further consideration, MTB
agrees with commenters that the
international descriptions should be
used when possible. Therefore, MTB is
revising the proper shipping names for
the cryogenic liquids and cold form
gases to include the international
descriptor, "refrigerated liquid", and the
associated "UN" prefix. The cryogenic
liquid descriptions are being specifically
named (in italics) in § 172.101 to
distinguish these gases from the cold
form gases.For compressed gases, MTB agrees
with CGA that a change in the prefix
should be handled by a proposed rule.
Therefore, MTB is revising the final rule
to provide for continued use of the
descriptions as presently found in 49
CFR 172.101 and also for the optional
use of the international descriptions.
Shippers are advised that shipping
descriptions without the word
"compressed" are not acceptable for
transport of gases in international
commerce.The six commenters who addressed
the effective date requested extension
periods from one to two years. Most of
the commenters maintained that
additional time was needed to exhaust
existing stocks of shipping documents
and product labels and to permit
re-marking of packagings to conform
with the new shipping descriptions and
prefix markings. Since fewer changes
will be required for shipping documents
and package markings, MTB believes
that the extension of the effective date
until October 1, 1984, is appropriate.
Corresponding changes are made to
other dates appearing in the final rule.This document does not impose
additional requirements and has the net
result of reducing costs imposed under
the final rule. A regulatory evaluation
and environmental assessment of the

final rule is available for review in the docket. The regulatory evaluation will not be modified to include the changes made under this document.

In consideration of the foregoing, the final rule published on June 16, 1983, in

Federal Register Document 83-15211, beginning on page 27874, is corrected and amended as follows:

1. On page 27883, second column, fourth paragraph, in the penultimate

line, "§ 173.11" is corrected to read "§ 171.11".

2. On page 27691, in § 171.101, in columns 2 and 3A of the Hazardous Materials Table, entries are revised to read as follows:

Present		Revised	
(1)	(3A)	(2)	(3A)
Hazardous materials descriptions and proper shipping names	Identification No.	Hazardous materials descriptions and proper shipping names	Identification No.
Revised			
Argon	NA1088	Argon or Argon, compressed	UN1088
Ethane	NA1035	Ethane or Ethane, compressed	UN1035
Ethylene	NA1982	Ethylene or Ethylene, compressed	UN1982
Helium	NA1046	Helium or Helium, compressed	UN1046
Hydrogen	NA1049	Hydrogen or Hydrogen, compressed	UN1049
Hydrogen chloride (RC-5000/2270)	NA1050	Hydrogen chloride (RC-5000/2270) or Hydrogen chloride, anhydrous (RC-5000/2270)	UN1050
Methane	NA1971	Methane or Methane, compressed	UN1971
Neon	NA1065	Neon or Neon, compressed	UN1065
Nitrogen	NA1066	Nitrogen or Nitrogen, compressed	UN1066
Nitrous oxide	NA1070	Nitrous oxide or Nitrous oxide, compressed	UN1070
Oxygen	NA1072	Oxygen or Oxygen, compressed	UN1072
Add			
Argon, cryogenic liquid	NA1951	Argon, refrigerated liquid (cryogenic liquid)	UN1951
Carbon dioxide, liquid (refrigerated)	NA2187	Carbon dioxide, refrigerated liquid	UN2187
Ethane, liquid (refrigerated)	NA1981	Ethane, refrigerated liquid	UN1981
Ethane-Propane mixture, liquid (refrigerated)	NA1981	Ethane-Propane mixture, refrigerated liquid	UN1981
Ethylene, cryogenic liquid	NA1038	Ethylene, refrigerated liquid (cryogenic liquid)	UN1038
Helium, cryogenic liquid	NA1983	Helium, refrigerated liquid (cryogenic liquid)	UN1983
Hydrogen, cryogenic liquid	NA1988	Hydrogen, refrigerated liquid (cryogenic liquid)	UN1988
Hydrogen chloride, liquid (refrigerated) (RC-5000/2270)	NA2186	Hydrogen chloride, refrigerated liquid (RC-5000/2270)	UN2186
Methane, cryogenic liquid	NA1972	Methane, refrigerated liquid (cryogenic liquid)	UN1972
Natural gas, cryogenic liquid	NA1972	Natural gas, refrigerated liquid (with high methane content) (cryogenic liquid)	UN1972
Neon, cryogenic liquid	NA1913	Neon, refrigerated liquid (cryogenic liquid)	UN1913
Nitrogen, cryogenic liquid	NA1977	Nitrogen, refrigerated liquid (cryogenic liquid)	UN1977
Nitrous oxide, liquid (refrigerated)	NA2291	Nitrous oxide, refrigerated liquid	UN2291
Oxygen, cryogenic liquid	NA1073	Oxygen, refrigerated liquid (cryogenic liquid)	UN1073

3. References in Parts 173, 174, 178 and 179 to the cold form gas names which appear in the June 16, 1983 document,

pages 27690-27713, are changed as listed below under "present" to read as shown in the "Revised to" column.

Present	Revised to
Carbon dioxide, liquid (refrigerated)	Carbon dioxide, refrigerated liquid
Ethane, liquid (refrigerated)	Ethane, refrigerated liquid
Ethane-Propane mixture, liquid (refrigerated)	Ethane-Propane mixture, refrigerated liquid
Hydrogen chloride, liquid (refrigerated) (RC-5000/2270)	Hydrogen chloride, refrigerated liquid (RC-5000/2270)
Nitrous oxide, liquid (refrigerated)	Nitrous oxide, refrigerated liquid

4. On page 27691, in § 172.203, paragraph (g)(3) is corrected to read "The shipping paper for each Class DOT-113 tank car containing a flammable gas must contain an appropriate notation, such as "DOT-113A," and the statement "Do Not Hump or Cut Off Car While in Motion."

5. On page 27692, in § 173.11, paragraph (c)(1), "July 1 and August 31, 1984" is revised to read "January 1 and February 28, 1985"; in paragraph (c)(2), second line, the word "even" is revised to read "odd", and in the last line, "1984" is revised to read "1985".

6. On page 27692, in § 173.31,

paragraph (a)(8), fourth line "January 1, 1984" is revised to read "October 1, 1984"; in the seventeenth line, "December 31, 1983" is revised to read "September 30, 1984", and in the last line, "January 1, 1984" is revised to read "October 1, 1984".

7. On page 27693, in § 173.31(c)(13)(iv), in the penultimate line, "pressure relief valve" is corrected to read "pressure relief valve".

8. On page 27693, in § 173.33(b), seventh line, "§ 178.340," is corrected to immediately precede "178.341", and in the last line, "§ 178-342-5" is corrected to read "§ 178.342-5"; in paragraph (b)(2), fourth line, "January 1, 1984" is

revised to read "October 1, 1984"; in the nineteenth line, "December 1, 1983" is revised to read "September 30, 1984"; in the last line, "January 1, 1984" is revised to read "October 1, 1984"; in paragraph (b)(3), fourth line, "January 1, 1984" is revised to read "October 1, 1984", and in the last line "December 31, 1983" is revised to read "September 30, 1984".

9. On page 27694, the Table in § 173.33(d)(2) is corrected to read as follows:

Specification	Ratio ¹
MC-330, MC-331	1 1/2
MC-338	1 1/4

¹Ratio of test pressure to the design pressure (maximum allowable working pressure or related pressure) of the tank.

10. On page 27694 in § 173.314(c), in the fifth line, "paragraphs (b) and (h)" is corrected to read "paragraphs (b) through (h)".

11. On page 27695, in the Table in § 173.315(e), the entry for "Hydrogen chloride, liquid (refrigerated)" is corrected to read as follows:

Kind of gas	Maximum permitted filling density		Specification container required	
	Percent by weight (see note 1)	Percent by volume (see par (f) of this section)	Type (see note 2)	Minimum design pressure (psig)
hydrogen chloride, refrigerant liquid	100.0	See Note 7	MC-331, MC-338	100, see Note 11
	81.8	.50	.do.	200, see Note 11
	86.7	.do.	.do.	450, see Note 11

12. On page 27686, in § 173.318(b)(1)(iii), fifth line, "paragraph 4.3.4" is corrected to read "paragraph 5.3.4.4."

13. On page 27697, in § 173.318(b)(2)(iii), second line, "discs" is corrected to read "discs".

14. On page 27697, in § 173.318(b)(5)(ii), eighth line, "valve" is corrected to read "value".

15. On page 27698, the second entry in the Table in § 173.318(f)(3) is corrected to read as follows:

PRESSURE CONTROL VALVE SETTING OR RELIEF VALVE SETTING

Maximum BR-10 discharge pressure (psig)	Maximum permitted filling density (percent by weight)			
	Carbon monoxide	Ethylene	Hydrogen	Methane or natural gas
15	75.0		8.8	40.5

16. On page 27698, in § 173.318(g)(2)(i), the formula is corrected to read "OWTT = (MRHT-24)/2".

17. On page 27699, in § 174.83(b), the beginning of the sentence is corrected to read "Any car placarded. . . ."

18. On page 27699, in § 176.76(h), second line, "vesel" is corrected to read "vessel".

19. On page 27699, in Part 177, the Table of Sections, the section heading "177.86 Training" is corrected to read "177.818 Training".

20. On page 27700, in § 177.818(a), second line, "vehcile" is corrected to read "vehicle".

21. On page 27700, in § 177.824(e)(2), seventh line, "§ 173.338-16(a)" is corrected to read "§ 178.338-16(a)".

22. On page 27700, in § 177.826, paragraph (c)(1), "1984" is revised to read "1985"; in paragraph (c)(2), the word "even" is revised to read "odd", and in the last line "1984" is revised to read "1985".

23. On page 27703, in the Table in § 178.338-1(e), the entry for "Aluminum" is corrected to read as follows:

Type metal	Jacket evacuated		Jacket not evacuated	
	Gauge	Inches	Gauge	Inches
Aluminum		0.125		0.100

24. On page 27704, in § 178.338-9(b)(2), in the penultimate line, "§ 178.318(b)(9)" is corrected to read "§ 178.338-18(b)(9)".

25. On page 27709, in § 179.400-8(c), the formula is corrected to read "t = [PL(3 + √(L/r))]/(8SE)".

(49 U.S.C. 1803, 1804, 1808, 49 CFR 1.53 and App. A. to Part 1)

Note.—The Materials Transportation Bureau has determined that this document 1) will not result in a "major rule" under the terms of Executive Order 12291, 2) is not a significant regulation under DOT's regulatory policy and procedures (44 FR 11034), and 3) does not require an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 *et seq.*). The original regulatory evaluation and environmental assessment is available for review in the docket.

Issued in Washington, D.C., on October 25, 1983

L. D. Sanuman,

Director, Materials Transportation Bureau.

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