

§ 173.304b

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S-1.1 (IBR, see §171.7 of this subchapter).

(iii) The temperature and pressure of the gas at the time the shipment is offered for transportation may not exceed $-18\text{ }^{\circ}\text{C}$ ($0\text{ }^{\circ}\text{F}$) and 290 psig for car-

bon dioxide and $-15.6\text{ }^{\circ}\text{C}$ ($+4\text{ }^{\circ}\text{F}$) and 290 psig for nitrous oxide. Maximum time in transit may not exceed 120 hours.

(2) The following pressure relief device settings, design service temperatures and filling densities apply:

Pressure relief device setting maximum start—to discharge gauge pressure in psig	Maximum permitted filling density (percent by weight)	
	Carbon dioxide, refrigerated liquid	Nitrous oxide, refrigerated liquid
105 psig	108	104
170 psig	105	101
230 psig	104	99
295 psig	102	97
360 psig	100	95
450 psig	98	83
540 psig	92	87
625 psig	86	80
Design service temperature $^{\circ}\text{C}$ ($^{\circ}\text{F}$)	$-196\text{ }^{\circ}\text{C}$ ($-320\text{ }^{\circ}\text{F}$)	$-196\text{ }^{\circ}\text{C}$ ($-320\text{ }^{\circ}\text{F}$)

[67 FR 51647, Aug. 8, 2002, as amended at 68 FR 24661, May 8, 2003; 68 FR 57632, Oct. 6, 2003; 68 FR 75742, Dec. 31, 2003; 70 FR 34076, June 13, 2005]

EDITORIAL NOTE: At 70 FR 34076, June 13, 2005, §173.304a was amended in the table in paragraph (a)(2) by removing the phrase “DOT-4A480” from the entry “Hydrogen sulfide”; however, the amendment could not be incorporated because that phrase does not exist in the entry.

§ 173.304b [Reserved]

§ 173.305 Charging of cylinders with a mixture of compressed gas and other material.

(a) *Detailed requirements.* A mixture of a compressed gas and any other material must be shipped as a compressed gas if the mixture is a compressed gas as designated in §173.115 and when not in violation of §173.301(a).

(b) *Filling limits.* (See §173.301.) For mixtures, the liquid portion of the liquefied compressed gas at $131\text{ }^{\circ}\text{F}$. plus any additional liquid or solid must not completely fill the container.

(c) *Nonpoisonous and nonflammable mixtures.* Mixtures containing compressed gas or gases including insecticides, which mixtures are nonpoisonous and nonflammable under this part must be shipped in cylinders as prescribed in §173.304(a) or as follows:

(1) Specification 2P (§178.33 of this subchapter). Inside metal containers equipped with safety relief devices of a type examined by the Bureau of Explosives and approved by the Associate Administrator, and packed in strong wooden or fiber boxes of such design as to protect valves from damage or accidental functioning under conditions in-

cident to transportation. Pressure in the container may not exceed 85 psia at $70\text{ }^{\circ}\text{F}$. Each completed metal container filled for shipment must be heated until content reaches a minimum temperature of $130\text{ }^{\circ}\text{F}$., without evidence of leakage, distortion or other defect. Each outside shipping container must be plainly marked “INSIDE CONTAINERS COMPLY WITH PRESCRIBED SPECIFICATIONS.”

(2) [Reserved]

(d) *Poisonous mixtures.* A mixture containing any poisonous material (Division 6.1 or 2.3) in such proportions that the mixture would be classed as poisonous under §173.115 or §173.132 must be shipped in packagings as authorized for these poisonous materials.

[29 FR 18743, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 173-70, 38 FR 5309, Feb. 27, 1973, Amdt. 173-94, 41 FR 16079, Apr. 15, 1976; 45 FR 32697, May 19, 1980; Amdt. 173-224, 56 FR 66275, 66279, Dec. 20, 1991; 66 FR 45379, Aug. 28, 2001; 67 FR 61013, Sept. 27, 2002; 67 FR 51651, Aug. 8, 2002; 68 FR 24662, May 8, 2003]