§ 173.115 Class 2, Divisions 2.1, 2.2, and 2.3—Definitions.

(a) Division 2.1 (Flammable gas). For the purpose of this subchapter, a flammable gas (Division 2.1) means any material which is a gas at 20 °C (68 °F) or less and 101.3 kPa (14.7 psia) of pressure (a material which has a boiling point of 20 °C (68 °F) or less at 101.3 kPa (14.7 psia)) which—

(1) Is ignitable at 101.3 kPa (14.7 psia) when in a mixture of 13 percent or less by volume with air; or

(2) Has a flammable range at 101.3 kPa (14.7 psia) with air of at least 12 percent regardless of the lower limit. Except for aerosols, the limits specified in paragraphs (a)(1) and (a)(2) of this section shall be determined at 101.3 kPa (14.7 psia) of pressure and a temperature of 20 °C (68 °F) in accordance with the ASTM E681–85, Standard Test Method for Concentration Limits of Flammability of Chemicals or other equivalent method approved by the Associate Administrator.

(b) Recordkeeping requirements. Following the certification of each Division 1.4G consumer firework as permitted by paragraph (a) of this section, the manufacturer and importer must maintain a paper record or an electronic image of the certificate, demonstrating compliance with this section. Each record must clearly provide the unique identifier assigned to the firework device and the Fireworks Certification Agency that certified the device. The record must be accessible at or through its principal place of business and be made available, upon request, to an authorized official of a Federal, State, or local government agency at a reasonable time and location. Copies of certification records must be maintained by each importer, manufacturer, or a foreign manufacturer’s U.S. agent, for five (5) years after the device is imported. The certification record must be made available to a representative of PHMSA upon request.

[78 FR 42477, July 16, 2013]


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[78 FR 42477, July 16, 2013]

§ 171.7 of this subchapter).

§ 173.133(b)(1)(i) or CGA P–20 (IBR, see mined using the formula in asphyxiant gas and oxidizing gas cryogenic gas, compressed gas in solution, asphyxiating gas and oxidizing gas). For the purpose of this subchapter, a non-flammable, non-poisonous compressed gas (Division 2.2) means any material (or mixture) which—

1. Exerts in the packaging a gauge pressure of 200 kPa (29.0 psig/33.8 psia) or greater at 20 °C (68 °F), is a liquefied gas or is a cryogenic liquid, and

2. Does not meet the definition of Division 2.1 or 2.3.

(c) Division 2.3 (Gas poisonous by inhalation). For the purpose of this subchapter, a gas poisonous by inhalation (Division 2.3) means a material which is a gas at 20 °C (68 °F) or less and a pressure of 101.3 kPa (14.7 psia) (a material which has a boiling point of 20 °C (68 °F) or less at 101.3 kPa (14.7 psia)) and which—

1. Is known to be so toxic to humans as to pose a hazard to health during transportation, or

2. In the absence of adequate data on human toxicity, is presumed to be toxic to humans because when tested on laboratory animals it has an LC⁵₀ value of not more than 5000 mL/m³ (see §173.116(a) of this subpart for assignment of Hazard Zones A, B, C or D).

3. The presence of adequate data on human toxicity, in which case:

(a) The term service pressure means the authorized pressure marking on the packaging. For example, for a cylinder marked “DOT 3A1800”, the service pressure is 12410 kPa (1800 psig).

(b) Division 2.2 (non-flammable, non-poisonous compressed gas—including compressed gas, liquefied gas, pressurized cryogenic gas, compressed gas in solution, asphyxiating gas and oxidizing gas). For the purpose of this subchapter, a non-flammable, non-poisonous compressed gas (Division 2.2) means any material (or mixture) which—

1. Is known to be so toxic to humans as to pose a hazard to health during transportation, or

2. In the absence of adequate data on human toxicity, is presumed to be toxic to humans because when tested on laboratory animals it has an LC⁵₀ value of not more than 5000 mL/m³ (see §173.116(a) of this subpart for assignment of Hazard Zones A, B, C or D).

4. The term service pressure means the authorized pressure marking on the packaging. For example, for a cylinder marked “DOT 3A1800”, the service pressure is 12410 kPa (1800 psig).

(j) Refrigerant gas or Dispersant gas. The terms Refrigerant gas and Dispersant gas apply to all nonpoisonous refrigerant gases; dispersant gases (fluorocarbons) listed in §172.101 of this subchapter and §§173.304, 173.314(c), 173.315(a), and 173.315(h) and mixtures thereof; and any other compressed gas having a vapor pressure not exceeding 260 psia at 54 °C (130 °F), used only as a refrigerant, dispersant, or blowing agent.

(k) For Division 2.2 gases, the oxidizing ability shall be determined by tests or by calculation in accordance with ISO 10156 (including Technical Corrigendum 1) (IBR, see §171.7 of this subchapter).

1. The following applies to aerosols (see §171.8 of this subchapter):

(a) An aerosol must be assigned to Division 2.1 if the contents include 85% by mass or more flammable components and the chemical heat of combustion is 30 kJ/g or more;

2. An aerosol must be assigned to Division 2.2 if the contents contain 1% by mass or less flammable components and the heat of combustion is less than 20 kJ/g.
§ 173.116 Class 2—Assignment of hazard zone.

(a) The hazard zone of a Class 2, Division 2.3 material is assigned in column 7 of the §172.101 table. There are no hazard zones for Divisions 2.1 and 2.2. When the §172.101 table provides more than one hazard zone for a Division 2.3 material, or indicates that the hazard zone be determined on the basis of the grouping criteria for Division 2.3, the hazard zone shall be determined by applying the following criteria:

<table>
<thead>
<tr>
<th>Hazard zone</th>
<th>Inhalation toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>LC₅₀ less than or equal to 200 ppm.</td>
</tr>
<tr>
<td>B</td>
<td>LC₅₀ greater than 200 ppm and less than or equal to 1000 ppm.</td>
</tr>
<tr>
<td>C</td>
<td>LC₅₀ greater than 1000 ppm and less than or equal to 3000 ppm.</td>
</tr>
<tr>
<td>D</td>
<td>LC₅₀ greater than 3000 ppm or less than or equal to 5000 ppm.</td>
</tr>
</tbody>
</table>

(b) The criteria specified in paragraph (a) of this section are represented graphically in §173.133, Figure 1.


§§ 173.117–173.119 [Reserved]

§ 173.120 Class 3—Definitions.

(a) Flammable liquid. For the purpose of this subchapter, a flammable liquid (Class 3) means a liquid having a flash point of not more than 60 °C (140 °F), or any material in a liquid phase with a flash point at or above 37.8 °C (100 °F) that is intentionally heated and offered for transportation or transported at or above its flash point in a bulk packaging, with the following exceptions:

(1) Any liquid meeting one of the definitions specified in §173.115.

(2) Any mixture having one or more components with a flash point of 60 °C (140 °F) or higher, that make up at least 99 percent of the total volume of the mixture, if the mixture is not offered for transportation or transported at or above its flash point.

(3) Any liquid with a flash point greater than 35 °C (95 °F) according to ISO 2592 (IBR, see §171.7 of this subchapter).

(b) Combustible liquid. (1) For the purpose of this subchapter, a combustible liquid means any liquid that does not meet the definition of any other hazard class specified in this subchapter and has a flash point above 60 °C (140 ° F) and with a fire point greater than 100 °C (212 °F) according to ISO 2592 (IBR, see §171.7 of this subchapter).

(2) Any liquid with a flash point greater than 35 °C (95 °F) which is in a water-miscible solution with a water content of more than 90 percent by mass.


EDITORIAL NOTE: For Federal Register citations affecting §173.115, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.