

Attachment 6

CLASS 2-COMPRESSED GASES

A6.1. General Requirements. For military members, failure to obey the mandatory provisions from paragraphs A6.2. through A6.25. and any provisions of mandatory subparagraph(s) hereunder is a violation of Article 92, Uniform Code of Military Justice (UCMJ). Civilian employees who fail to obey the provisions from paragraph A6.2. through A6.25. and any provisions of mandatory subparagraph(s) hereunder are subject to administrative disciplinary action without regard to otherwise applicable criminal or civil sanctions. Personnel shall not deviate from provisions provided and comply with cylinder selection and packaging paragraph requirements. **(T-0)**. Not all packaging paragraphs are inclusive and packaging selection is based on the type of flammable, nonflammable or toxic gas category as stated in each packaging paragraph or compressed gas Table. This attachment contains information concerning the packaging and general handling instructions for Class 2.1 (flammable gas), Class 2.2 (nonflammable, nontoxic compressed gas), and Class 2.3 (toxic gas). See Attachment 3 for additional information concerning Class 2 material.

A6.2. Aerosols. Prepare aerosols meeting the definition of “Consumer Commodity” as authorized under paragraph A13.3. Package aerosol products identified under the proper shipping name “Aerosols” as follows:

A6.2.1. Aerosols Containing Non-Toxic Substances. For an aerosol containing non-toxic substances, pack in inner non-refillable non-metal receptacles not exceeding 120 mL (4 fluid-ounce) capacity each, or in inner non-refillable metal or plastic receptacles not exceeding 1 L (34 fluid-ounces) provided all of the following conditions are met:

A6.2.1.1. Pressure in the aerosol container must not exceed 1245 kPa at 55 degrees C (180 psig at 130 degrees F) and each receptacle must be capable of withstanding without bursting a pressure of at least 1.5 times the equilibrium pressure of the contents at 55 degrees C (130 degrees F). **(T-0)**.

A6.2.1.2. If the pressure exceeds 970 kPa at 55 degrees C (140 psig at 130 degrees F) but does not exceed 1105 kPa at 55 degrees C (160 psig at 130 degrees F) use a DOT 2P, or ICAO/IATA IP7, IP7A, or IP7B inner metal receptacle. If the pressure exceeds 1105 kPa at 55 degrees C (160 psig at 130 degrees F) but does not exceed 1245 kPa at 55 degrees C (180 psig at 130 degrees F) use a DOT 2Q, or ICAO/IATA IP7A, or IP7B inner metal receptacle.

A6.2.1.3. Liquid content of the material and the gas must not completely fill the receptacle at 55 degrees C (130 degrees F). **(T-0)**.

A6.2.1.4. Each aerosol exceeding 120 mL (4 fluid ounce) capacity must have been heated until the pressure in the aerosol is equivalent to the equilibrium pressure of the content at 55 degrees C (130 degrees F) without evidence of leakage, distortion, or other defects. **(T-0)**.

A6.2.1.5. Protect the valves by a cap or other suitable means.

- A6.2.1.6. Tightly pack aerosols in a strong outer packaging capable of meeting packaging performance test outlined in A19.3.4. UN specification (UN marked) packaging is not required. The complete package must not exceed 30 kg (66 lbs) gross weight. **(T-0)**.
- A6.2.2. Other Aerosols. For other aerosols (including those containing toxic substances), pack in inner non-refillable non-metal receptacles not exceeding 120 mL (4 fluid ounce) capacity each, or in inner non-refillable metal receptacles not exceeding 1 L (34 fluid ounces) provided all of the following conditions are met:
- A6.2.2.1. Pressure in the aerosol container must not exceed 1500 kPa at 55 degrees C (217 psig at 130 degrees F) and each receptacle must be capable of withstanding without bursting a pressure of at least 1.5 times the equilibrium pressure of the contents at 55 degrees C (130 degrees F). **(T-0)**.
- A6.2.2.2. If the pressure exceeds 970 kPa at 55 degrees C (140 psig at 130 degrees F) but does not exceed 1105 kPa at 55 degrees C (160 psig at 130 degrees F) use a DOT 2P, or ICAO/IATA IP7, IP7A, or IP7B inner metal receptacle. If the pressure exceeds 1105 kPa at 55 degrees C (160 psig at 130 degrees F) but does not exceed 1245 kPa at 55 degrees C (180 psig at 130 degrees F) use a DOT 2Q, or ICAO/IATA IP7A, or IP7B inner metal receptacle. If the pressure exceeds 1245 kPa at 55 degrees C (180 psig at 130 degrees F) but does not exceed 1500 kPa at 55 degrees C (217 psig at 130 degrees F) use an ICAO/IATA IP7B inner metal receptacle.
- A6.2.2.3. Liquid content of the material and the gas must not completely fill the receptacle at 55 degrees C (130 degrees F). **(T-0)**.
- A6.2.2.4. Each aerosol exceeding 120 mL (4 fluid ounce) capacity must have been heated until the pressure in the aerosol is equivalent to the equilibrium pressure of the contents at 55 degrees C (130 degrees F) without evidence of leakage, distortion, or other defects. **(T-0)**.
- A6.2.2.5. Protect the valves by a cap or other suitable means.
- A6.2.2.6. Tightly pack aerosols in an outer fiberboard (4G), wooden (4C1, 4C2), plywood (4D), reconstituted (4F), or plastic (4H1, 4H2) box meeting PG II requirements.
- A6.2.3. For an aerosol charged with a non-toxic solution containing a biological product or medical preparation that could be deteriorated by heat and compressed gases (except Class 6.1, PG III material that are poisonous or nonflammable) pack in inner non-refillable metal receptacles provided all of the following conditions are met:
- A6.2.3.1. Inner receptacles not exceeding 575 mL (20 fluid ounces) each.
- A6.2.3.2. Pressure in the receptacle must not exceed 970 kPa at 55 degrees C (140 psig at 130 degrees F). **(T-0)**.
- A6.2.3.3. The liquid content of the product and gas must not completely fill the receptacle at 55 degrees C. **(T-0)**.
- A6.2.3.4. One aerosol out of each lot of 500 or less, filled for shipment, must be heated until the pressure in the container is equivalent to the equilibrium pressure of the contents at 55 degrees C (130 degrees F) without evidence of leakage, distortion, or other defects. **(T-0)**.

A6.2.3.5. Protect the valves by a cap or other suitable means.

A6.2.3.6. Package inner receptacles in a strong outer packaging. The outer packaging must be capable of meeting the limited quantity performance standards outlined in A19.3.4. UN specification (UN marked) packaging is not required. **(T-0)**.

A6.2.3.7. The complete package must not exceed 30 kg (66 lbs) gross weight. **(T-0)**.

A6.2.4. For an aerosol containing a biological product or medical preparation that could be deteriorated by heat and is nonflammable, pack in inner non-refillable metal receptacles provided all of the following conditions are met:

A6.2.4.1. The first five subparagraph requirements of A6.2.3. related to the aerosol receptacles apply.

A6.2.4.2. Tightly pack aerosol containers in an outer fiberboard (4G), wooden (4C1, 4C2), plywood (4D), reconstituted (4F), or plastic (4H1, 4H2) box meeting PG II requirements.

A6.3. Small Receptacles Containing Compressed Gas. Package Small receptacles of compressed gases, other than aerosols or Consumer Commodities, as identified in this paragraph, as follows. Unless otherwise specified, UN specification (UN marked) packaging is not required. Each package must not exceed 30 kg (66 lbs) gross weight. **(T-0)**. For unregulated compressed gases, comply with general handling requirements in A3.3.2.

A6.3.1. Use containers, except lighter refills, of not more than 120 mL (4 fluid ounces, 7.22 cubic inches or less) capacity each. Package inner receptacles in strong outer packaging.

A6.3.2. Use metal containers filled with nonhazardous material not over 90 percent capacity at 21 degrees C (70 degrees F) then charged with a nonflammable, nonliquefied gas. Test each container to three times the gas pressure at 21 degrees C (70 degrees F). When refilled, the container may be transported when retested to three times the gas pressure at 21 degrees C (70 degrees F) provided one of the following conditions are met:

A6.3.2.1. Container is not over 1 L (1 quart) capacity and charged to not more than 1172 kPa at 21 degrees C (170 psig at 70 degrees F).

A6.3.2.2. Container is not over 114L (30 gallon) capacity and charged to not more than 517 kPa at 21 degrees C (75 psig at 70 degrees F).

A6.3.3. Package electronic tubes of not more than 489 mL (30 cubic inch) volume charged with gas to a pressure of not more than 241 kPa (35 psig). Package in strong outer packaging.

A6.3.4. Use inside metal containers of a capacity not over 570.7 mL (35 cubic inches, 19.3 fluid ounces), charged with nonflammable, nonpoisonous or noncorrosive liquefied compressed gas designed for audible fire alarm systems. Pressure in the container must not exceed 482.6 kPa at 21 degrees C (70 psig at 70 degrees F). **(T-0)**. The completely assembled non-refillable container must be designed and fabricated with a burst pressure of not less than four times its charged pressure at 55 degrees C (130 degrees F.) **(T-0)**. Each refillable inside container must be designed and fabricated with a burst pressure of not less than four times its charged pressure at 55 degrees C (130 degrees F). **(T-0)**. The liquid portion of the gas must not completely fill the container at 55 degrees C (130 degrees F). **(T-0)**.