

- (1) dangerous goods required for the operation of the vehicle, machine or equipment, such as fire extinguishers, tire inflation canisters, safety devices, etc., must be securely mounted in the vehicle, machine or equipment. Aircraft may also contain other articles and substances which would otherwise be classified as dangerous goods but which are installed in that aircraft in accordance with the pertinent airworthiness requirements and operating regulations. If fitted, life-rafts, emergency escape slides and other inflation devices must be protected such that they cannot be activated accidentally. Vehicles containing dangerous goods identified in Subsection 4.2 - List of Dangerous Goods as forbidden on passenger aircraft may only be transported on cargo aircraft;
- (2) vehicles equipped with theft-protection devices, installed radio communications equipment or navigational system must have such devices, equipment or system disabled.

Replacements for the dangerous goods permitted in paragraphs (a) and (b) must not be carried under this packing instruction.

	Net quantity per package passenger aircraft	Net quantity per package Cargo Aircraft Only
UN 3166, <b>Battery-powered equipment, or Battery-powered equipment vehicle</b>	No limit	No limit

## PACKING INSTRUCTION 953

This instruction applies to UN 2807, **Magnetized material** on passenger aircraft and Cargo Aircraft Only.

Magnetized material will be accepted only when:

- (a) devices such as magnetrons and light meters have been packed so that the polarities of the individual units oppose one another;
- (b) permanent magnets, where possible, have keeper bars installed;
- (c) the magnetic field strength at a distance of 4.6 m (15 ft) from any point on the surface of the assembled consignment:
  - (1) does not exceed 0.418 A/m (0.00525 gauss), or
  - (2) produces a magnetic compass deflection of 2 degrees or less.

Note: For loading instructions see 9.3.11.

### Determination of shielding requirements

The magnetic field strength of magnetized materials must be measured using measuring devices having a sensitivity sufficient to measure magnetic fields greater than 0.0398 A/m (0.0005 gauss) within a tolerance of plus or minus 5%, or with a magnetic compass sensitive enough to read a two-degree variation, preferably in 1 degree increments or finer. Methods of determining if a magnetized article meets the definition of a magnetized material include:

Method 1— When an oersted meter is used, it is placed on one of two points positioned 4.6 m (15 ft) apart and located in an area that is free from magnetic interference other than the earth's magnetic field. The oersted meter is then aligned with the second point and "balanced" to a zero reading. The magnetic article is then placed on the other point and the magnetic field strength is measured by reading the meter while rotating the package 360 degrees in its horizontal plane. If the maximum field strength observed is 0.418 A/m (0.00525 gauss) or less, the article is acceptable for air transport. When the maximum field strength exceeds 0.418 A/m (0.00525 gauss) shielding should be applied until a reading of 0.418 A/m (0.00525 gauss) or less has been attained.

Method 2— When a magnetic compass is used as a sensing device, it should be placed on one of two points positioned 4.6 m (15 ft) apart which are aligned in an East/West direction and in an area that is free from any magnetic interference other than the earth's magnetic field. The packaged item to be tested is placed on the other point and rotated 360 degrees in its horizontal plane for indication of compass deflection. When the maximum compass deflection observed is two degrees or less, the article is acceptable for air transport. When the maximum compass deflection of an item exceeds 2 degrees, shielding must be applied until the maximum deflection is not more than 2 degrees.

If the maximum field strength observed at a distance of 2.1 m (7 ft) is less than 0.159 A/m (0.002 gauss) or there is no significant compass deflection (less than 0.5 degree), the article is not restricted as a magnetized material.

## PACKING INSTRUCTION 954

This instruction applies to UN 1845, **Carbon dioxide, solid (dry ice)** on passenger aircraft and Cargo Aircraft Only.

The General Packing Requirements of Subsection 5.0.2 must be met.

### Additional Packing Requirements

#### In packages:

- (a) must be in packaging designed and constructed to permit the release of carbon dioxide gas and to prevent a build-up of pressure that could rupture the packaging;
- (b) the shipper must make arrangements with the operator(s) for each shipment, to ensure ventilation safety procedures are followed;
- (c) the Shipper's Declaration requirements of Subsections 8.1 and 10.8.1 are only applicable when the Carbon dioxide, solid (dry ice) is used as a refrigerant for dangerous goods that require a Shipper's Declaration;
- (d) when a Shipper's Declaration is not required, the following information, as required by 8.2.3 for the Carbon dioxide, solid (dry ice), must be contained in the "Nature and Quantity of Goods" box on the air waybill and should be shown in the following order:
  - 1) UN 1845;
  - 2) proper shipping name (Carbon dioxide, solid or Dry ice);

- 3) 9 (the word "Class" may be included prior to the number "9");
  - 4) the number of packages; and
  - 5) the net weight of dry ice in each package.
- (e) the net weight of the Carbon dioxide, solid (dry ice) must be marked on the outside of the package.

**Dry ice used as a refrigerant for other than dangerous goods:**

- (a) may be shipped in a unit load device or other type of pallet prepared by a single shipper provided that the shipper has made prior arrangements with the operator;
- (b) the unit load device, or other type of pallet must allow the venting of the carbon dioxide gas to prevent a dangerous build up of pressure;
- (c) the shipper must provide the operator with written documentation stating the total weight of the dry ice contained in the unit load device or other type of pallet.

**Notes:**

- 1. Refer to the relevant airline's loading procedures for Carbon dioxide, solid (dry ice) limitations.
- 2. For Air Waybill requirements see 8.2.3. For loading instructions see 9.3.12.
- 3. For cooling purposes, an overpack may contain Carbon dioxide, solid (dry ice), provided that the overpack meets the requirements of Packing Instruction 904.

UN Number	Net quantity per package
UN 1845 <b>Carbon dioxide, solid (Dry ice)</b>	200 kg

**PACKING INSTRUCTION 955**

This instruction applies to UN 2990, **Life-saving appliances, self-inflating** and UN 3072, **Life saving appliances, not self-inflating** on passenger aircraft and Cargo Aircraft Only.

The description "Life-saving appliances, self-inflating", (UN 2990) is intended to apply to life-saving appliances that present a hazard if the self-inflating device is activated accidentally.

Life-saving appliances, such as life-rafts, life-vests, aircraft survival kits or aircraft evacuation slides, may only contain the dangerous goods listed below:

- (a) Division 2.2 gases, must be contained in cylinders which conform to the requirements of the appropriate national authority of the country in which they are approved and filled. Such cylinders may be connected to the life-saving appliance. These cylinders may include installed actuating cartridges (cartridges, power device of Division 1.4C and 1.4S) provided the aggregate quantity of deflagrating (propellant) explosives does not exceed 3.2 g per unit. When the cylinders are shipped separately, they shall be classified as appropriate for the Division 2.2 gas contained and need not be marked, labelled or described as explosive articles;
- (b) signal devices (Class 1), which may include smoke and illumination signal flares; signal devices must be packed in plastic or fibreboard inner packagings;
- (c) small quantities of flammable substances, corrosive solids and organic peroxides (Classes 3 and 8, Divisions 4.1 and 5.2), which may include a repair kit and not more than 30 strike-anywhere matches. The organic peroxide may only be a component of a repair kit and the kit must be packed in strong inner packaging. The strike-anywhere matches must be packed in a cylindrical metal or composition packaging with a screw-type closure and be cushioned to prevent movement;
- (d) electric storage batteries (Class 8) and lithium batteries (Class 9); and
- (e) first aid kits which may include flammable, corrosive and toxic articles or substances.

The appliances must be packed so that they cannot be accidentally activated, in strong outer packagings and except for life-vests, the dangerous goods must be in inner packagings packed so as to prevent movement. The dangerous goods must be an integral part of the appliance without which it would not be operational and in quantities which do not exceed those appropriate for the actual appliance when in use.

Passenger restraint systems consisting of a cylinder charged with a non-liquefied, non-flammable compressed gas and no more than two actuating cartridges per passenger restraint system that meet the requirements of the State of manufacture must be packed in strong outer packagings so they cannot be accidentally activated.

Life-saving appliances may also include articles and substances, not subject to these Regulations, which are an integral part of the appliance.

	Net quantity per package passenger aircraft	Net quantity per package Cargo Aircraft Only
UN 2990, <b>Life-saving appliances, self-inflating</b> , or <b>Life saving appliances, not self-inflating</b>	No limit	No limit