



Classification and Labels

Classification of Dangerous Goods:

Dangerous goods are defined as those which meet the requirements of one or more than one of the risk classes in the grouping by type of risk involved drawn up by the United Nations.

According to this classification, there exist nine types of risks (enumerated at convenience and not according to risk degree):

Class 1 - Explosives.

Class 2 - Gases.

Class 3 - Flammable Liquids.

Class 4 - Flammable solids or substances.

Class 5 - Oxidizing substances and organic peroxides.

Class 6 - Toxic and infectious substances.

Class 7 - Radioactive substances.

Class 8 - Corrosive substances.

Class 9 - Miscellaneous dangerous substances and articles.

Packing groups:

Dangerous goods are assigned to the corresponding packing group according to their hazard level:

Packing group I > Great danger

Packing group II > Medium danger

Packing group III > Minor danger

Classification and Labels

CLASS 1 - Explosives.

Sub-classification:

Class 1 is divided into six sub-classes:

- **Sub-class 1.1.** :Explosives with a massive explosion hazard.
- **Sub-class 1.2.** : Explosives with a severe blast/projection hazard.
- **Sub-class 1.3.**: Explosives with fire hazard.
- **Sub-class 1.4.** Minor fire or blast/projection hazard.
- **Sub-class 1.5.** Insensitive substances with a massive explosion hazard.
- **Sub-class 1.6.** Extremely insensitive articles with no massive explosion hazard.

Class 1 - (Sub-classes 1.1, 1.2, 1.3)



Class 1 - (Sub-class 1.4)
Including Sub-class 1.4, Compatibility Group S



Class 1 - (Sub-class 1.5)



Class 1 - (Sub-class 1.6)



Classification and Labels

CLASS 2 - Gases.

Sub- classification:

- **Sub-class 2.1.** Flammable gases.
- **Sub-class 2.2.** Non-flammable gases. Non-toxic gases.
- **Sub-class 2.3.** Poisonous gases.

Class 2 - (Sub-class 2.1.)

Class 2 - Gases: (Sub-class 2.2.)

Class 2 - (Sub-class 2.3.)



CLASS 3 - Flammable liquids.



CLASS 4 - Flammable solids or substances.

Sub- classification:

- **Sub-class 4.1.** Flammable solids.
- **Sub-class 4.2.** Spontaneously combustible solids.
- **Sub-class 4.3.** Flammable when wet.

Classification and Labels

Class 4 - (Sub-class 4.1)



Class 4 - (Sub-class 4.2)



Class 4 - (Sub-class 4.3)



CLASS 5 - Oxidizing substances and organic peroxides.

Sub- classification:

- Sub-class 5.1. Oxidizing agent.
- Sub-class 5.2. Organic peroxide.



CLASS 6 - Toxic and infectious substances.

Sub- classification:

- Sub-class 6.1. Poison.
- Sub-class 6.2. Biohazard.



Classification and Labels

CLASS 7 - Radioactive substances.

Radioactive substances comprise substances or a combination of substances which emit ionizing radiation.

Radioactive substances sub-classes are organized according to their T.I. (Transport Index):

Sub-class 1 – White

Sub-class 2 – Yellow

Sub-class 3 – Yellow

Criticality Safety Index



CLASS 8 - Corrosive substances.

Substances which, due to their chemical action, can cause serious damage when in contact with human skin or any type of cargo.



Packing group assignment according to corrosive effects:

Packing group	Exposition time	Observation time	Corrosive effects in steel or aluminium
I	≤ 3 min	≤ 60 min	—
II	> 3 min ≤ 60	≤ 14 d	—
III	> 60 min ≤ 4 h	≤ 14 d	6,25 mm (1/4 in) Per year at a proof temperature of 55°

CLASS 9 - Miscellaneous dangerous substances and articles.

Substances which present hazard during transportation but it does not meet the definition of any other hazard class.



Classification and Labels

Package Marking and Labeling

The consignor is responsible for every mark and label that is due when transporting dangerous goods and/or packages containing them, according to the corresponding regulations. Each package must have the right size to leave enough space for attaching all marks and labels required for transportation.

Hazardous Material - Environmental Hazard Label



Limited Quantity Label



Cargo Aircraft Only Label



Cryogenic Liquid Label



Package Orientation Label: This End Up



Keep Away From Heat Label



Radioactive Material Excepted Package Label



Lithium Metal Battery Label





Classification and Labels

Magnetized Material

Magnetized material is any material with magnetic force to attract or repel other materials, particularly metals. "IATA Dangerous Goods Regulations" defines this kind of material as all material that when packaged for air transportation possesses a magnetic field force of 0.002 gauss or more, at a distance of 2.1 metres (7 feet) from any point of the surface of the consignment.

