

A handy guide to shipping of Hazardous Goods from the International Maritime Dangerous Goods (IMDG) Code.

The International Maritime Dangerous Goods (IMDG) Code was developed as a uniform international code for the shipping of hazardous goods by sea covering such matters as packing, container traffic and stowage, with particular reference to the segregation of incompatible substances.

For information on required documentation when transporting hazardous goods, please see our free guide available here: [Dangerous Goods Documentation Requirements](#)

Class	Description	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	8	9
2.1	Flammable Compressed Gas	✓	✓	✓	X	X	X	✓	X	X	✓	X	✓
2.2	Non Flammable Compressed Gas	✓	✓	✓	X	✓	X	✓	✓	X	✓	✓	✓
2.3	Poison Gas	✓	✓	✓	X	✓	X	✓	✓	✓	✓	✓	✓
3	Flammable Liquids	X	X	X	✓	✓	X	X	X	X	✓	✓	✓
4.1	Flammable Solid	X	✓	✓	✓	✓	X	✓	X	X	✓	X	✓
4.2	Spontaneously Combustible	X	X	X	X	X	✓	X	X	X	X	X	✓
4.3	Dangerous When Wet	✓	✓	✓	X	✓	X	✓	X	X	✓	X	✓
5.1	Oxidising Agents	X	✓	✓	X	X	X	X	✓	X	X	X	✓
5.2	Organic Agents	X	X	X	X	X	X	X	X	✓	X	X	✓
6.1	Poisons	✓	✓	✓	✓	✓	X	✓	X	X	✓	✓	✓
8	Corrosives	X	✓	✓	✓	X	X	X	X	X	✓	✓	✓
9	Miscellaneous Hazard	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Key Compatible Cannot load together

Icons ✓ X

Shipping of Hazardous Goods - Class Descriptions

Class 2.1: Flammable Gases:

Gases which are ignitable when in a mixture of 13% or less by volume with air; or have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit.

Class 2.2: Non-flammable, non-toxic gases:

Gases which dilute/ replace the oxygen normally in the atmosphere; or are oxidizing - gases which can, by providing oxygen, cause or contribute to the combustion of other material; or gases which are not classed under the other classes.

Class 2.3: toxic gases:

Toxic or corrosive gases known to be hazardous to human health; or are presumed to be toxic or corrosive to humans because they have a LC50 value equal to or less than 5,000 ml/m3 (ppm).

Class 3: Flammable liquids:

Flammable liquids are liquids, mixtures of liquids or liquids containing solids in solution or suspension which give off a flammable vapour at or below 61°C closed-cup test, normally referred to as the “flashpoint”. This also includes:

- Liquids offered for transport at temperatures at or above their flashpoint
- Substances transported or offered for transport at high temperatures in a liquid state, which give off a flammable vapour at temperatures equal to or below the maximum transport temperature.

Class 4.1: Flammable solids, self-reactive substances and desensitized explosives:

Solids which, under conditions encountered in transport, can possibly combust or may cause or contribute to fire through friction caused during transport; self-reactive substances (solids and liquids) which are liable to undergo a highly exothermic reaction; solid desensitized explosives which could explode if not diluted sufficiently.

Class 4.2: Substances liable to spontaneous combustion:

Substances (solids and liquids) which are liable to spontaneous heating under transport conditions, heating up in contact with air or being liable to catch fire.

Class 4.3: Substances which, in contact with water, emit flammable gases:

Substances (solids and liquids) which by interacting with water, are likely to become spontaneously flammable or to give off flammable gases in dangerous quantities.

Class 5.1: Oxidizing substances:

Substances which could cause or contribute to the combustion of other materials. Such substances may be contained in an article.

Class 5.2: Organic peroxides:

Organic peroxides are thermally unstable substances which can undergo exothermic self-accelerating decomposition. In addition, they may have one or more of the following properties:

- Burn rapidly
- Cause damage to the eyes
- Be sensitive to impact or friction
- Be liable to explosive decomposition
- React dangerously with other substances.

Class 6.1: Toxic substances:

These substances can cause death, serious injury or harm human health if swallowed, inhaled or absorbed through skin contact.

Class 8: Corrosive substances:

Substances which by chemical action are likely to cause severe damage when in contact with living tissue or, in the case of leakage, will materially damage or even destroy other goods or the means of transport.

Class 9: Miscellaneous dangerous substances and articles:

Substances and articles are substances and articles which, during transport, present a danger not covered by other classes.

The numerical order of the classes and divisions does not represent the degree of danger.

CNMC