

Dangerous Goods

Most people working in the chemical sector recognize the guidelines associated to the storage and transport of their products. However, many people are astounded at what is categorized as dangerous or hazardous.

Many of us are unaware that at some point, non- dangerous items in small quantity can be considered dangerous upon exceeding the amount limit set by the authorities or once we repack the items. As a matter of fact, we can find dangerous goods in every household or even handbag.

In here, we will guide you of the logistics process for packaged dangerous goods like chemical, food flavorings, perfume, soaps, detergents, cosmetics, dyes, paints and plastics.

Some of the products are labeled with the hazard symbols related to the use of the item but not necessarily mean that it is dangerous in shipping. On the other hand, we cannot conclude that hazardous materials packed in small quantity are qualified to be shipped as the classification and regulation vary.

Dangerous goods – sometimes called hazardous materials – may be pure chemicals, mixtures of substances, manufactured products or articles which can pose a risk to people, animals or the environment if not properly handled in use or during transport.

If you are shipping items which have batteries included, you need to know that Lithium batteries can easily overheat and ignite in certain circumstances. Regulations were tightened in 2009 after several serious fire incidents during their transport.

It is important to know if your goods are considered DG since fines and penalties will be imposed for non-compliance with the measures set by the regulating bodies. This means shipping dangerous goods requires both careful planning and specialized knowledge.

Dangerous Goods Safety Adviser

It is important to have a dangerous goods safety adviser or DGSA if you regularly ship DG items, unless they are in acceptable quantities or you seldom engage in the carriage, loading or unloading of DG items with very low risk of danger.

Your DGSAs and any other employees dealing with dangerous goods must all undergo appropriate training. You should have a DGSA if you are shipping goods internationally.

Qualified employee dealing with dangerous goods

Another major factor that influences the shipping of hazardous materials is the awareness of all people involved in the chain of shipment.

Everyone in the chain including the cargo handlers, packers, equipment operators, documentary staff, truckers, hazardous goods approvers need to be suitably trained not only in their job-specific tasks but also in the whole chain.

Each employee should be aware of the regulations relating to the cargo, the regulations at the ports, destination country and the processes and documentation involved in the movement.

Incoterms

As the seller, you need to know the scope of your responsibilities by identifying the incoterms. Delivered Duty Paid (DDP) means you will be responsible for the shipment from your door to the consignee's door. DDP includes all aspects and risks including insurance, duties, taxes, freight and customs clearance processes.

Materials Safety Data Sheet (MSDS)

The MSDS is provided by the supplier of your product.

Packaging and labeling

Packaging includes proper placarding and labeling of the goods, the inner and outer packaging and the labeling of the shipping container.

All hazardous goods containers packed and being transported using whichever mode, should have the appropriate labels; if it is ready to be transported physically, this should be done only after the hazardous labels has been fixed on the outside of the container.

This hazardous label should contain the IMDG code/UN No of the cargo to indicate the risk category, the level of danger from the contents of the container.

Packing limited quantities

Dangerous goods shipped in limited quantities may only be packed in inner packaging placed in suitable outer packaging.

The maximum weight is 30kg for outer packaging, or 20kg for shrink-wrapped trays. The maximum weight for the individual containers depends on the type of goods.

These limits are listed in column 7a of the 'Dangerous goods list' in part 3 of ADR and the International Maritime Dangerous Goods (IMDG) Code. For certain goods, the limit in column 7a of Table A is zero, which means that those goods may not be shipped as limited quantities – in other words that dangerous goods rules apply regardless of the quantity in the shipment.

Mode of transport

The regulations governing the transport of dangerous goods by:

- **Air** - is specified in IATA Dangerous Goods Regulations by Air
- **Sea** - IMDG code
- **Road** – Road And Transport Authority

All dangerous goods are classified according to these manuals and the rules are all explained in detail. You need to check if your goods are permitted to be shipped by all modes of transport or if they have to be shipped by air or land due to regulations by sea. You also need to check onward transportation from the port or airport which will be by road or rail.

Documentation

The most crucial part of shipping DG items is the documentation part. We recommend the use of a professional service in this field like freight forwarders. You may also process your own documents as per the regulations otherwise it will cause some delays with your shipment.

Dangerous goods shipments require a special declaration form prepared by the shipper. Among the information that is generally required includes the shipper's name and address; the consignee's name and address; descriptions of each of the dangerous goods, along with their quantity, classification, and packaging; and emergency contact information. Common formats include the one issued by the International Air Transport Association (IATA) for air shipments and the form by the International Maritime Organization (IMO) for sea cargo.

Check List for documentation you will require:

- Dangerous Goods Note
- A commercial invoice
- Packing List
- Material Safety Data Sheet (MSDS),
- Shipper's letter of instruction
- A certificate of origin (optional)
- It is your responsibility to provide the proper export documentation to your freight forwarder/logistics provider.

Freight Forwarder Service

Most international freight forwarders are accredited or licensed by the governing bodies to handle dangerous goods shipments. In this case, they have highly trained staff to assist you in your DG requirements.

Buyer

You should provide all the important details and documents to your consignee in preparation for the customs clearance at the destination.

Seller's Responsibility

It is always your responsibility to comply with laws and regulations regarding shipment of dangerous goods. From a legal point of view, it is not possible to pass this responsibility to a logistics supplier, freight forwarder or carrier.

Where you can find out more

[UN](#)

[IATA](#)

*National regulations also apply

Dangerous Goods Classification

Dangerous goods are separated into different classes which affect how you must package and transport them. If you are only shipping limited quantities the rules can be less strict. In such cases, it is important to check the definition of “limited quantity”.

DANGEROUS GOODS CLASSIFICATION:

Class 1: Explosives

(Division 1.1 , 1.2 , 1.3 , 1.4 , 1.5 , 1.6)

Class 2: Gases

Division 2.1 – Flammable gas

Division 2.2 – Non-Flammable, non-toxic gas

Division 2.3 – Toxic gas

Class 3: Flammable Liquids

Class 4: Flammable Solids

Division 4.1 – Flammable solids, self-reactive sub-stances,

Polymerizing substances and solid desensitized explosives

Division 4.2 – Substances liable to spontaneous combustion

Division 4.3 – Substances which, in contact with water, emit flammable gases

Class 5: Oxidizing Substances and Organic Peroxides

Division 5.1 – Oxidizer

Division 5.2 – Organic peroxides

Class 6: Toxic and Infectious Substances

Division 6.1 – Toxic substances

Division 6.2 – Infectious substances

Class 7: Radioactive Material

Class 8: Corrosives

Class 9: Miscellaneous Dangerous Substances and Articles, including Environmentally Hazardous Substances