



## Dangerous Goods

Are you transporting cargo without realizing it is hazardous? The consequences can be serious.

**DSV**

Global Transport and Logistics

## Executive Summary

Perfumes, dyes or plastics can be classified as “dangerous goods” or “hazardous materials”, so it is no wonder that businesses – especially those just setting up or expanding into new products or markets – can easily fall foul of the myriad of regulations when transporting goods.

Goods that you may not have thought of as dangerous include electronic equipment, lithium batteries, food flavorings, perfumes and beauty products.

There are many rules relating to packaging, labeling and stowing that can vary according to a wide range of criteria. The potential for breaking those rules with risk of delays or of incurring penalties is significant. When the regulations can also vary according to the volumes in a shipment, the mode of transport and even the countries transited, it is easy to see why expert knowledge is vital. In the most serious cases, goods can be confiscated and destroyed, and directors of companies can face prison sentences.

This white paper aims to help businesses ensure they know exactly how the regulations affect the products they are buying or selling. It is especially aimed at companies seeking to expand their product range or the number of countries they export to.

## Introduction

Most people working in the chemical sector understand the rules related to the storage and transport of their products. Many people are surprised at what is classified as dangerous or hazardous.

They are even more surprised to find out that what is not “dangerous” in a low quantity can suddenly become so, once a certain quantity limit is exceeded, or if different packaging is used.

In fact there are “dangerous” goods in almost every home and almost every handbag.

This white paper examines the supply chain for packaged “dangerous goods” which may come as a surprise to many people – not just what are obviously chemicals but also food flavorings, perfume, soaps, detergents, cosmetics, dyes, paints and plastics.

Many of the individual containers will be labeled with symbols, but these usually only relate to the hazards in use of the product, and do not automatically mean that it is dangerous in transport. However, it must not be assumed that all substances which are packed in small or retail packaging are not subject to transport regulations, since classification criteria vary so much.

## Why is it important to know if you are moving dangerous goods?

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 transit.

Non-compliance with dangerous goods transport regulations can be costly. For example, one major retailer faced fines of \$144,000 due to improper shipping paper declarations for the dangerous materials in its retail-sized bottles of nail polish and sun block. A leading pharmaceutical distribution company received a \$91,000 fine for an undeclared shipment of skin care products containing alcohol.

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 transportation. So it goes without saying: moving dangerous goods requires both careful planning and specialized knowledge.

# Dangerous Goods Safety Adviser

## What else you need to be aware of:

You must have a dangerous goods safety advisor (DGSA) if you transport dangerous goods unless:

- they are in "limited quantities"
- you only occasionally engage in the carriage, loading or unloading of dangerous goods posing little danger of risk.

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

## Who is deemed to be an employee dealing with dangerous goods?

Anyone who ships or causes to be shipped dangerous goods including people who:

- Load and unload or handle dangerous materials/goods
- Prepare dangerous materials/goods for transportation, and/ or
- Operate a vehicle used to transport dangerous materials/ goods

The definition also includes anyone who designs, manufactures, fabricates, inspects, reconditions, maintains/repairs or tests a package or packaging component that is qualified for use in transporting hazardous materials.

## Exceptions

You don't need to follow all the normal packaging and labeling regulations, and you don't have to have a dangerous goods safety adviser if you're transporting "limited quantities" of some dangerous goods. But your staff must still have safety training.

## Safety Data Sheet (SDS)

This can be obtained from the company you purchase the product from.

## Packaging and labeling

The packing and labeling of the goods is one of the most important things you need to consider for shipments. Refer to product packaging instructions for guidance.

The UN has established a universal system for the classification, packaging, marking and labeling of dangerous goods to facilitate their safe transport. National and international regulations governing road, rail and sea transport are all based on the UN system. Under the regulations, packaging must meet or exceed minimum standards of performance before it can be authorized for the carriage of dangerous goods.

## 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.

## Air Transport

The regulations governing the transport of dangerous goods by air is specified in 'IATA Dangerous Goods Regulations by Air' (see QR code below).

## Documentation

Documentation is a priority for all dangerous goods shipments. The 'Dangerous Goods Declaration' is a legal requirement for the transportation of goods. The person responsible for signing the 'Dangerous Goods Declaration' is required by law to have had the appropriate training.

## Your Responsibilities

It is always your responsibility to comply with laws and regulations regarding dangerous goods. From a legal point of view, it is not possible to pass the responsibility to your logistics provider.



# Classes of Dangerous Goods

Dangerous goods are separated into different classes which affect how you must package and transport them.

## CLASS TYPE OF MATERIAL

1	Explosive substances and articles
2.1	Flammable gas (e.g. butane)
2.2	Non-flammable and non-toxic gases which could cause asphyxiation (e.g. nitrogen, helium, carbon dioxide) or oxidisers (e.g. oxygen)
2.3	Toxic gases (e.g. chlorine, phosgene)
3	Flammable liquids (e.g. lighter fluid, petrol)
4.1	Flammable solids, self-reactive substances and solid desensitised explosives
4.2	Substances liable to spontaneous combustion
4.3	Substances which, in contact with water, emit flammable gases
5.1	Oxidising substances
5.2	Organic peroxides
6.1	Toxic substances
6.2	Infectious substances
7	Radioactive material
8	Corrosive substances
9	Miscellaneous dangerous substances and articles





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