



Shipping dangerous goods

If you consign goods that are classified as potentially dangerous when transported, you must arrange their packing and transportation by air, sea, road, rail or inland waterway according to international regulations.

The UN Model Regulations harmonise the rules on the various methods of transportation into a classification system in which each dangerous substance or article is assigned to a **class** defining the type of danger which that substance presents. The **packing group** (PG) then further classifies the level of danger according to PG I, PG II or PG III.

Together class and PG dictate how you must package, label and carry dangerous goods, including inner and outer packaging, the suitability of packaging materials, and the marks and label they must bear.

Other regulations define the training and qualifications that dangerous goods drivers and safety advisors must hold, and when you must use one.

This guide brings together the various requirements for moving dangerous goods.

The classification of dangerous goods

The carriage of dangerous goods by road, rail, inland waterway, sea and air is regulated internationally by European agreements, directives and regulations, and parallel legislation in the UK.

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If you're involved in the processing, packing or transporting of dangerous goods, you will first need to classify them correctly so that all organisations in the supply chain, including the emergency authorities, know and understand exactly what the hazard is.

Dangerous goods are assigned to different **classes** depending on their predominant hazard. The United Nations (UN) classifies dangerous goods in the following classes and, where applicable, divisions:

UN Class	Dangerous Goods	Division(s) if applicable	Classification
1	Explosives	1.1 - 1.6	Explosive
2	Gases	2.1	Flammable gas
		2.2	Non-flammable, non-toxic gas
		2.3	Toxic gas
3	Flammable liquid		Flammable liquid
4	Flammable solids	4.1	Flammable solid
		4.2	Spontaneously combustible substance
		4.3	Substance which emits flammable gas in contact with water
5	Oxidizers and organic peroxides	5.1	Oxidising substance
		5.2	Organic peroxide
6	Toxic and infectious substances	6.1	Toxic substance
		6.2	Infectious substance
7	Radioactive material		Radioactive material
8	Corrosive substances		Corrosive substance
9	Miscellaneous dangerous substances		Miscellaneous dangerous substances

The consignor - the person or business shipping the goods - is responsible for classifying, marking and packaging the dangerous goods.

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Dangerous goods safety adviser's qualifications and training

Businesses that handle process or transport dangerous goods on a regular basis must appoint a Dangerous Goods Safety Adviser (DGSA) in order to comply with the Health and Safety at Work Act 1974. If you transport smaller quantities of dangerous goods than those in the legislation, or if you're main or secondary activities are not the carriage or related loading or unloading of dangerous goods, but occasionally you do it, then you do not need to appoint a DGSA.

The DGSA has three main duties:

- monitoring compliance with rules governing transport of dangerous goods
- advising their business on the transport of dangerous goods
- preparing an annual report to management on the business' activities in the transport of dangerous goods

The DGSA is also responsible for:

- monitoring procedures and safety measures
- investigating and compiling reports on any accidents or emergencies
- advising on the potential security aspects of transport

These regulations can apply to any person who allows dangerous goods to be carried, not just the transport operator. This could include cargo consignors, freight forwarders, warehouse workers and manufacturers producing goods that will be collected from their factory.

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Training

DGSAs must:

- obtain a **vocational training certificate** after receiving appropriate training
- **pass a written examination**

The Department for Transport approves the mandatory DGSA exams. It has appointed the Scottish Qualification Authority (SQA) as its agent. SQA sets, marks and organises the exams, and issues the vocational training certificates for the whole of the UK, and the certificates are recognised in all European Union member states. [Find out about the DGSA exams on the SQA website - http://www.sqa.org.uk/sqa/1577.html](http://www.sqa.org.uk/sqa/1577.html)

Training courses for DGSAs are run by independent providers and by the trade associations for each mode of transport. Course lengths vary from two to five days, depending on the mode(s) of transport covered.

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Regulations for transporting dangerous goods by air, sea, road and rail transport

International regulations govern the carriage of dangerous goods by road, rail, inland waterway, sea and air.

International carriage of dangerous goods by road

Regulation is via the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

ADR sets out the requirements for the classification, packaging, labelling and certification of dangerous goods. It also includes specific vehicle and tank requirements and other operational requirements. For example all drivers of vehicles carrying dangerous goods (including those with a gross vehicle weight of 3.5 tonnes or less) must have an ADR training certificate. The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (as amended) apply ADR in Great Britain - England, Wales and Scotland.

[Read about carrying dangerous goods by road on the Health & Safety Executive website - http://www.hse.gov.uk/cdg/manual/index.htm](http://www.hse.gov.uk/cdg/manual/index.htm)

Carriage by rail

The carriage of dangerous goods by rail is governed by Appendix C of the Convention Covering International Carriage by Rail - International Carriage of Dangerous Goods by Rail. The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (as amended) apply in Great Britain.

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[Read frequently asked questions about the security requirements on the carriage of dangerous goods by rail on the DfT website - http://www.dft.gov.uk/topics/freight/dangerous-goods/](http://www.dft.gov.uk/topics/freight/dangerous-goods/)

Transport by inland waterway

In the European Union, the International Carriage of Dangerous Goods by Inland Navigation (ADN) came into force on 28 February 2009. ADN only applies in the UK in relation to the training and examination system for safety advisers and the connected issuing and renewal of vocational training certificates. It does not apply to the carriage of dangerous goods by inland waterways in the UK given that there is no physical connection between them and European inland waterways.

Transport by sea

The International Maritime Dangerous Goods (IMDG) code provides guidance on transporting dangerous goods by sea. **[Find information about the IMDG code on the International Maritime Organization \(IMO\) website - http://www.imo.org/Publications/IMDGCode/Pages/Default.aspx](http://www.imo.org/Publications/IMDGCode/Pages/Default.aspx)**

The IMDG code is used by operators transporting dangerous goods on journeys involving a sea crossing. This includes ferry services. In the UK, the Merchant Shipping (Dangerous Goods and Marine Pollutant) Regulations 1997 and the Dangerous Substances in Harbour Areas Regulations 1987 also apply. **[Read about dangerous goods on the Maritime and Coastguard Agency \(MCA\) website - http://www.dft.gov.uk/mca/mcga07-home/shipsandcargoes/mcga-cargosafety/dangerousgoods.htm](http://www.dft.gov.uk/mca/mcga07-home/shipsandcargoes/mcga-cargosafety/dangerousgoods.htm)** **Opens in a new window.**

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Transport by air

The International Civil Aviation Organization's (ICAO) Technical Instructions are an internationally agreed set of provisions governing the requirements for transporting dangerous goods by air. The International Air Transport Association (IATA) publishes the Dangerous Goods Regulations in accordance with the ICAO technical instructions.

You can [find publications and more information on the carriage of dangerous goods by air on the Civil Aviation Authority website -](http://www.caa.co.uk/default.aspx?catid=1219&pagetype=90&pageid=9600)
<http://www.caa.co.uk/default.aspx?catid=1219&pagetype=90&pageid=9600> **Opens in a new window.**

Some airlines and countries have their own derogations, known as State and Operator Variations. You should check in the IATA Dangerous Goods Regulations or Intercargo Services Ltd for more information.

Documentation when moving dangerous goods

When dangerous goods are transported, the consignment must be accompanied by a transport document, declaring the description and nature of the goods. Documentation must be in accordance with the specifications set by the dangerous goods regulations applicable to the chosen mode of transport.

The transport document must be completed and signed by the consignor - ie the person or firm from whom the goods have been received for transport. Legislation contains an example of a multimodal dangerous goods transport document.

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To move air cargo that is classified as dangerous a dedicated air transport document such as the International Air Transport Association (IATA) Shipper's Declaration of Dangerous Goods must be used.

Marking and labelling of dangerous goods - suppliers' responsibilities

As well as the requirements specific to their transportation, suppliers of dangerous goods are required by law to label their hazardous products and packaged chemicals with hazard symbols, warnings and safety advice. A range of internationally recognised symbols has been developed so that people handling the goods know the nature of the hazard they present. For more information, [download a guide to the Control of Substances Hazardous to Health \(COSHH\) Regulations from the Health & Safety Executive \(HSE\) website \(PDF, 205K\) - Opens in a new window.](#)

Manufacturers must also include instructions for use, either on the label or on a leaflet supplied with the product. Suppliers must provide material safety data sheets for dangerous products used in the workplace.

For chemicals, the general principles of classification and labelling for supply are explained by the Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (the CHIP 4 rules). You can [read about CHIP on the HSE website - Opens in a new window.](#)

The European Regulation on Classification, Labelling and Packaging of Substances and Mixtures (CLP Regulation) will over a five-year period commencing on 1 December 2010 gradually replace CHIP 4. You can [find an overview of CLP and related legislation on the HSE website - Opens in a new window.](#)

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You can [read a list of symbols, abbreviations, risk and safety phrases on the HSE website](#) -
Opens in a new window.

Safety labelling requirements may vary between third countries so you are advised to check requirements in destination countries before you move your goods. For example, the USA has different requirements from most European countries, so although dangerous goods from America can be moved with their labelling, it is likely that you will have to relabel them before you can supply them in the European Union.

For information on how to label your goods correctly, read our guide on [how to label and package goods being shipped out of the UK](#).

Packaging of dangerous goods for transport

If you trade in dangerous goods, you must comply with packaging requirements contained in the relevant legislation in order to transport goods safely. See the page in this guide on the [regulations for air, sea, road and rail transport](#).

Packaging rules

Packaging has to be designed and constructed to United Nations (UN) specification standards and must pass practical transport related tests such as being dropped, held in a stack and subjected to pressure demands. It must also meet the needs of the substance it is to contain. Packagings must be certified by a national competent authority.

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UN approved packaging is marked with the prefix 'UN' and followed by codes that are listed in the relevant regulations relating to the national and international carriage of dangerous goods by road, rail, air and sea.

The Vehicle Certification Agency Dangerous (VCA) Goods Office has responsibility for the certification of dangerous goods packaging within the UK. You can [access the dangerous goods packaging approvals database on the VCA website - Opens in a new window.](#)

Packaging must also bear the correct label or labels for the substance in the package.

Enforcement of dangerous goods regulations

Different authorities are responsible for enforcing the regulations for transport by road, air and sea.

Road

The Health & Safety Executive (HSE), in conjunction with the police and the Vehicle and Operator Services Agency (VOSA), is the enforcement authority in respect of compliance to the Carriage of Dangerous Goods and use of Transportable Pressure Equipment Regulations 2009 (as amended) covering road transport in Great Britain. For international road movements, under the ADR European Agreement concerning the International Carriage of Dangerous Goods by Road, each national authority en route enforces its own requirements.

You can [read how the regulations relating to the carriage of dangerous goods are enforced on the HSE website - Opens in a new window.](#)

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Air

The Civil Aviation Authority (CAA) is the agency responsible for matters related to compliance for goods offered to airlines for carriage by air.

The CAA currently receives around 600 dangerous goods incident reports a year. You can [read about the process used for incidents relating to the carriage of dangerous goods on the CAA website - Opens in a new window.](#)

Sea

The Maritime and Coastguard Agency is the agency responsible for matters related to compliance for goods moving by sea.

Rail

The HSE and the Office of Rail Regulation enforce the transport of dangerous goods by rail.

[Read about security requirements when transporting dangerous goods by rail on the Department for Transport website - Opens in a new window.](#)

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Radiation screening at ports and airports

Programme Cyclamen forms a key part of the government's counter-terrorism strategy. It involves the screening of incoming freight, vehicles, passengers and pedestrians to detect and deter the illicit importation of radioactive and nuclear material by terrorists or criminals.

The programme is jointly managed by the Home Office and UK Borders Agency (UKBA). The Home Office has the lead responsibility for implementing the programme at ports and airports whilst UKBA is responsible for operating the equipment and for the initial detection of any imported radiological or nuclear material.

Countries including Finland, Russia and the USA use similar equipment and procedures.

How screening operates

Fixed radiation detection equipment has been installed at ports and airports. There is also mobile capability supporting the fixed portals ensuring that air, sea and Channel Tunnel traffic entering the UK is subject to screening.

The equipment is entirely passive and is able to detect radiation emitted from the vehicle or object being examined. The equipment doesn't emit radiation and there is no effect on any object or person passing through the detection system.

If an illicit source is suspected or found, specialist authorities will ensure that these incidents are dealt with quickly and safely, minimising the risk and inconvenience to the public.

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Sources of radiation

Some radioactive material may be carried legally by approved operators, whilst some foodstuffs, ceramics, and other items naturally emit radiation. In addition, a number of medical treatments emit radiation.

The screening equipment can identify a wide variety of radioactive sources and action is taken to ensure that legitimate importations can pass through quickly.

VCA Dangerous Goods Office

01372 226 111

DfT Enquiry Helpdesk

0300 330 3000

SQA Customer Contact Centre

0845 279 1000

UNECE

+41 22 917 12 34

IMO

020 7735 7611

MCA Headquarters

023 8032 9100

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CAA

01293 573 800

IATA Dangerous Goods Hotline

+1 514 390 6770

Related web sites you might find useful

Classification and other information on moving dangerous goods on the Vehicle Certification

Agency website

<http://www.vca.gov.uk/dangerousgoods/dangerous-goods-offi.asp>

Carriage of dangerous goods advice on the Health and Safety Executive website

<http://www.hse.gov.uk/cdg/index.htm>

DGSA exam information on the SQA website

<http://www.sqa.org.uk/sqa/1577.html>

DGSA training courses guidance on the DfT website

<http://www.dft.gov.uk/pgr/freight/dgt1/road/training/dgsafetyadvisors>

Contact details for the Competent Authorities applying ADR in European Union member states on the UNECE website

http://www.unece.org/trans/danger/publi/adr/country-info_e.htm

Carriage of dangerous goods information on the DfT website

<http://www.dft.gov.uk/topics/freight/dangerous-goods/>

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IMDG code information on the IMO website

<http://www.imo.org/Publications/IMDGCode/Pages/Default.aspx>

Dangerous goods information on the MCA website

<http://www.mcga.gov.uk/c4mca/mcga07-home/shipsandcargoes/mcga-cargosafety/dangerousgoods.htm>

Air transportation of dangerous goods information on the CCA website

<http://www.caa.co.uk/default.aspx?catid=1219&pagetype=90&pageid=9600>

Movement of dangerous goods by air on the IATA website

http://www.iata.org/whatwedo/cargo/dangerous_goods/

Shipper's Declaration forms on the IATA website

http://www.iata.org/whatwedo/cargo/dangerous_goods/download.htm

Download the COSHH Regulations from the HSE website (PDF, 205K)

<http://www.hse.gov.uk/pubns/indg136.pdf>

Symbols, abbreviations, risk and safety phrases explained on the HSE website

<http://www.hse.gov.uk/chip/phrases.htm>

ADR 2011 on the UNECE website

http://www.unece.org/trans/danger/publi/adr/adr_e.html

Approved dangerous goods packaging database on the VCA website

<http://www.vca.gov.uk/dangerousgoods/packaging-approvals.asp>

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Enforcement policy information on the HSE website

<http://www.hse.gov.uk/enforce/index.htm>

Carriage of dangerous goods manual on the HSE website

<http://www.hse.gov.uk/cdg/manual/opstratenforce.htm>

Incidents relating to the carriage of dangerous goods information on the CAA website

<http://www.caa.co.uk/default.aspx?catid=1219&pagetype=90>

Radioactive substances regulations information on the Environment Agency website

<http://www.environment-agency.gov.uk/business/sectors/32481.aspx>

Radioactive substances and waste information on the NetRegs website

<http://www.environment-agency.gov.uk/netregs/63316.aspx>

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