

Glossary

Definitions of the following commonly used terms have been included for your convenience. Additional hazardous materials shipping definitions can be found in the Department of Transportation regulations, 49 CFR §171.8, as well as A.I.R. Shipper Chapter 1.3 (which reflects ICAO's standard definitions).

49 CFR

Title 49, Transportation, Code of Federal Regulations (CFR), Parts 100-185. This manual is published by the US Department of Transportation (DOT) and contains hazardous materials tables that are applicable to carriers in the United States.

Account number

Your customer account number for a specific carrier.

ADR

French abbreviation for Accord européen relative au transport international des marchandises Dangereuses par Route (or the European Agreement concerning the International Carriage of Dangerous Goods by Road). The ADR is administered by the United Nations Economic Commission for Europe (UNECE) and governs the transnational transport of hazardous materials. It was last amended for use as of 1 January 2013.

*The ADR primarily states that- with the exception of certain exceptionally dangerous materials-- hazardous materials may in general be transported internationally in wheeled vehicles, provided that conditions are met for regulating:

1. Packaging and labels.
2. The construction, equipment, and use of transport vehicles. Each hazardous material entry has a unique 4-digit UN Number.

Air

For the purposes of DGIS, Air refers to shipping via passenger or cargo aircraft. (See also Cargo Aircraft Only and Passenger Air)

AFMAN

Air Force Manual 24-204, Preparing Hazardous Materials for Military Air Shipments. This manual includes hazardous materials tables that are used by military carriers only.

Authorizations

A special permit that can be given to a shipper by the Department of Transportation (DOT) for emergency circumstances or when the shipper can show that there is a safe alternative to existing hazardous material shipping rules documented in 49 CFR.

Bulk-Packaging

Packaging other than for a vessel or a barge that includes a transport vehicle or freight container in which hazardous materials are loaded with no intermediate form of containment and which has capacities as follows:

1. As a receptacle for a liquid- a maximum capacity greater than 450L (119 gal)
2. As a receptacle for a solid- a maximum net mass greater than 400kg (882 lb) and a maximum capacity greater than 450L (119 gal)
3. As a receptacle for gas (as defined in 49 CFR 173.115 of Subchapter C- a water capacity greater than 454 kg (1000 lb)

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Degrees Celsius or Centigrade.

Cargo aircraft only

An aircraft that is used to transport cargo and is not engaged in carrying passengers.

Carrier

A person or company who transports passengers or property in commerce by rail car, aircraft, motor vehicle, or vessel.

Chemical table

For the purposes of this program, a chemical table is a list of hazardous materials and their shipping requirements and restrictions, based on domestic or international regulations, which may have variations by private carriers (such as UPS or FedEx).

Code of Federal Regulations

A codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. The code is divided into 50 Titles. The title related to the transport of hazardous materials is Title 49,Transportation.

Combination packaging

A combination of packaging for transport purposes consisting of one or more inner packagings secured in a non-bulk outer packaging. It does not include a composite packaging.

Consignee

The person or place shown on a shipping document, package marking, or other media as the location to which a carrier is directed to transport a hazardous material

Dangerous goods

Articles or substances that are capable of posing a risk to health, safety, property, or the environment as defined by the UN Model Regulations (q.v.) and the ICAO Technical Instructions. (The 49 CFR equivalent is the term hazardous materials.)

Dangerous Goods Advisor™ (DGA™)

Labelmaster's trademarked reference material that shows all details and definitions for a selected hazardous material.

DGIS™-

Dangerous Goods Information System™. A Labelmaster Software product that provides an online hazardous materials shipping and document management system for manufacturers and shippers that ship domestic and international dangerous goods. This custom software program prepares dangerous goods shipping documents to manage a company's dangerous goods shipping documentation from one web-based location. It includes regulatory table entry, dangerous goods shipping documents, Material Safety Data Sheets (MSDS), packaging documentation with test reports and closure instructions, UN packaging and label diagram, and Emergency Response Guidebook (ERG) code page.

DOT

Department of Transportation. The federal regulatory body covering the shipment of hazardous material within the United States.

Emergency contact number

Shippers must provide a 24-hour emergency response telephone number (including area code) for use in the event of an emergency involving hazardous material(s).

ERG

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The Emergency Response Guidebook. The ERG is developed jointly by the US Department of Transportation (DOT), Transport Canada, and the Secretariat of Communications and Transportation of Mexico (SCT). It is intended for use by firefighters, police and other emergency service personnel who may be the first to arrive at the scene of a transportation incident involving hazardous material. It is primarily a guide to aid first responders in:

1. Quickly identifying the specific or generic classification of the material(s) involved in an incident.
(See also: Hazard class)
2. Protecting themselves and the general public during the initial response phase of the incident.

*The ERG is updated every 4 years to accommodate new products and technology.

Exceptions

An exception from the shipping requirements pertaining to 49 CFR shipments only. Exceptions are described in 49 CFR Part 173. If the field on the hazardous material table says "150," then the applicable exception would be described in §173.150.

°F

Degrees Fahrenheit.

FedEx Ship Manager

FedEx's shipping management software.

Forbidden

In DGIS, indicates that the 49 CFR or International Air regulations do not allow transportation of a material.

Gas

One of three material states that also include liquid and solid.

Gross weight or Gross mass

The weight of a packaging plus the weight of its contents.

Ground

Shipping via land transportation only, including truck and rail.

Hazard Class

The primary category of hazard assigned to a hazardous material based on the most predominant of the hazards it represents. A hazardous material may meet the defining criteria for more than one hazard class but it is assigned to only one hazard class.

In 49CFR 172.101 and 173, nine hazard classes are defined.

Class 1: Explosives.

Class 2: Gases.

Class 3: Flammable and Combustible Liquids.

Class 4: Flammable Solids.

Class 5: Oxidizing Substances, Organic Peroxides.

Class 6: Toxic Substances and Infectious Substances.

Class 7: Radioactive Materials.

Class 8: Corrosives.

Class 9: Miscellaneous Hazardous Materials.

Hazardous materials table

A list of hazardous materials with their shipping limitations and regulations. These tables are published by various regulatory and private organizations to ensure the safe transport of dangerous goods. Many of

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these regulations are based on 49 CFR. For example, UPS and FedEx publish their own enhanced tables based on 49 CFR DOT regulations.

Hazardous waste

Any material that is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR part 262.

History

This is a feature within DGIS that allows a shipper to save documentation of their shipment records within their program for up to one year. Copies of original shipping papers are saved and can be reprinted for reference.

ICAO

International Civil Aviation Organization. A United Nations organization that regulates the shipment of hazardous materials by air internationally.

IMDG

International Maritime Dangerous Goods Code for shipping by sea, published by IMO.

IMO

International Maritime Organization, which publishes the IMDG Code for shipping by sea.

Inner packaging

In DGIS, packaging that requires an outer packaging for transport. It does not include the inner receptacle of a composite packaging.

International Air regulations

Based on the ICAO regulations, including private air-carrier variations and limitations.

Labels

The hazard-warning indicators required for a package filled with a hazardous material conforming to the associated hazard class and proper shipping name (unless the package is otherwise excepted from labeling by a provision in 49 CFR Part 172, Subpart E, or Part 173).

Laser Form

Hazardous materials Laser forms (provided by private carriers UPS and FedEx) are 8 1/2 x 11 inch sheets of paper divided into eight perforated panels. Each panel is considered a shipping paper; the top 2 panels have adhesive backing. *Note:* that the Cross Border Ground UPS shipping form is a separate form (with 6 perforated panels)

Liquid

One of three material states that also include gas and solid.

Ltd Qty

Limited Quantity. When referring to a particular hazardous material, means the maximum amount of the material for which there is a specific labeling or packaging authorization.

Marine pollutant

A material that is listed in Appendix B to 49 CFR §172.101 (also see §171.4) and, when in a solution or mixture of one or more marine pollutants, is packaged in a concentration which equals or exceeds:

1. Ten percent by weight of the solution or mixture for materials listed in the appendix; or
2. One percent by weight of the solution or mixture for materials that are identified as severe marine pollutants in the appendix.

Maritime

For the purposes of DGIS, Maritime refers to shipping materials by sea, regulated by the IMO's International Maritime Dangerous Goods Code (IMDG).

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Mixture

A material composed of more than one chemical compound or element.

Mode

Any of the following transportation methods: rail, highway, air, or water.

MSDS

Material Safety Data Sheet. A document that contains information about exposure to a specific hazardous material, such as potential negative health effects or handling precautions. Required information on MSDS sheets is specified by OSHA's Hazard Communication Standard (HCS)

NA Numbers

North American numbers are identifiers used in commerce and transportation to identify hazardous chemicals or classes of hazardous materials. NA numbers are used like UN ID numbers. If a material does not have a UN ID number, it may be assigned an NA number. These materials and NA numbers apply only for transporting hazardous material within the US and to and from Canada. NA numbers are usually four-digit numbers, such as 1993, and are ideally preceded by the letters NA (for example, NA1993).

N.O.S.

Not otherwise specified. Often included in a generic proper shipping name

Non-bulk packaging

Packaging for transport of a hazardous material that is a smaller quantity than bulk packaging. Non-bulk packaging includes the four following types:

1. *Combination* - For transport purposes, refers to a combination of packaging, consisting of one or more inner packagings secured in a non-bulk outer packaging. It does not include composite packaging.
2. *Composite* - Packaging that consists of both an inner and outer packaging that are used together to provide a single shipping container, such as a polyethylene liner attached to an outer cardboard carton
3. *Overpack* - An enclosure that is used by a single consignor to provide protection or convenience in handling of a package or to consolidate two or more packages. Overpack does not include a transport vehicle, freight container, or aircraft unit load device. Examples of overpacks are one or more packages that are:
 - (3.1) Placed or stacked onto a load board such as a pallet and secured by strapping, shrink wrapping, stretch wrapping, or other suitable means; or
 - (3.2) Placed in a protective outer packaging such as a box or crate.
4. *Salvage* - A special packaging conforming to 49 CFR §173.3 into which damaged, defective, leaking, or non-conforming hazardous materials packages, or hazardous materials that have spilled or leaked, are placed for purposes of transport for recovery or disposal.

Not accepted

The carrier will not transport that specific material due to safety concerns.

ORM or ORM-D

Other regulated material (domestic shipping only). (See 49 CFR §173.144.)

OSHA

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Occupational Safety & Health Administration. A United States government organization assigned with assuring safe and healthful working conditions by setting and enforcing standards and by providing training, outreach, education, and assistance.

Outer packaging

The outermost enclosure of a composite or combination packaging together with any absorbent materials, cushioning, and any other components necessary to contain and protect inner receptacles or inner packaging.

Overpack

An enclosure that is used by a single consignor to provide protection or convenience in handling of a package or to consolidate two or more packages. An overpack does not include a transport vehicle, freight container, or aircraft unit load device. Examples of overpacks are one or more packages:

1. Placed or stacked onto a load board, such as a pallet, and secured by strapping, shrink wrapping, stretch wrapping, or other suitable means; or
2. Placed in a protective outer packaging, such as a box or crate.

Package

A packaging plus its contents.

Packaging

A receptacle that contains the substances to be shipped.

Packing Group

A grouping according to the degree of danger presented by hazardous materials. Packing Group I indicates great danger; Packing Group II, medium danger; Packing Group III, minor danger. (See 49 CFR 172.101(f))

Passenger air

Mode of transportation involving an aircraft carrying any person other than a crew member, company employee, authorized representative of the United States, or a person accompanying the shipment.

PHMSA

Pipeline and Hazardous Materials Safety Administration. As one of ten agencies within the U.S. Department of Transportation (DOT), PHMSA works to protect the American public and the environment by ensuring the safe and secure movement of hazardous materials to industry and consumers by all transportation modes, including the nation's pipelines. PHMSA provides the DOT with an administration focused solely on its pipeline and hazardous materials transportation programs. Through PHMSA, the DOT develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.3 million mile pipeline transportation system and the nearly 1 million daily shipments of hazardous materials by land, sea, and air.

PSN

Proper Shipping Name. The name of a hazardous material.

Qty

Quantity. The amount of material based on a unit of measure (UOM).

"Q" Value

The quantities of different dangerous goods contained in one outer packaging must be such that "Q" does not exceed the value of 1, where "Q" is calculated using the

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*where n_i are the net quantities of the different dangerous goods, and M_i are the maximum net quantities for these different dangerous goods according to the International Air dangerous goods table for passengers or cargo aircraft as applicable. However, the following dangerous goods do not need to be taken into account in the calculation of the "Q" value:

1. carbon dioxide, solid (dry ice), UN 1845;
2. those where columns 8 and 9 of the dangerous goods table indicate "No limit";
3. those with the same UN number, packing group, and physical state (i.e. solid or liquid), providing they are the only dangerous goods in the package and the total net quantity does not exceed the maximum net quantity according to the dangerous goods table;
4. those where columns 9b and 10b of the dangerous goods table indicate a maximum gross mass per package.

Rail

Ground transportation designed to carry freight or non-passenger personnel by rail and including a box car, flat car, gondola car, hopper car, tank car, and occupied caboose.

RQ

Reportable Quantity. The quantity limit of a hazardous material where, if it has accidentally been released into the environment, it must be reported to the federal government's centralized reporting center, the National Response Center (NRC).

Salvage packaging

Salvage packaging means a special packaging conforming to 49 CFR §173.3 into which damaged, defective, leaking, or non-conforming hazardous materials packages, or hazardous materials that have spilled or leaked are placed for purposes of transport for recovery or disposal.

Shipper

The person sending the shipment

Shipper's Certification

The UPS Shipper's Certification is a manifest of all shipped packages on any given day. It's required by DOT to be a valid representation of the hazardous materials on the truck.

Shipping paper

A shipping order, bill of lading, manifest, or other shipping document serving a similar purpose and prepared in accordance with the appropriate regulations.

Single packaging

A non-bulk packaging other than a combination packaging.

Solid

One of three material states that also include gas and liquid.

Solution

Any homogeneous liquid mixture of two or more chemical compounds or elements that will not undergo any segregation under conditions normal to transportation.

Special permit

From 49 CFR (DOT): "A document issued by the Associate Administrator under the authority of 49 U.S.C. 5117 permitting a person to perform a function that is not otherwise permitted under subchapter A or C of this chapter, or other regulations issued under 49 U.S.C. 5101 et seq. (e.g., Federal Motor Carrier Safety routing requirements). The terms special permit and authorization have the same meaning for purposes of subchapter A or C of this chapter or other regulations issued under 49 U.S.C. 5101 through 5127. An

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authorization issued prior to October 1, 2005 remains valid until it is past its expiration date, terminated by the Associate Administrator, or issued as a special permit, whichever occurs first."

Special Provisions

Codes for special provision applicable to hazardous materials. The meaning and requirements of special provisions are as set forth in §172.102 of 49 CFR and section 3.4 of A.I.R. Shipper.

Subrisk

The secondary hazard of the material other than the primary Hazard Class.

T Number

This is an approval number (e.g. T-***) that must be marked on the shipping paper and the outer package when shipping Lighters and Lighter refills (UN 1057).

TDG

Transportation of Dangerous Goods. Defines regulations for the ground and air transport of dangerous goods originating within or outside of Canada. These regulations are defined by Transport Canada, a government organization that develops safety standards and regulations for the transportation of dangerous goods by ground and air transport in Canada. Shipping tables associated with TDG regulations include:

1. Schedules 1 – Classes 1 to 9
2. Schedules 1 – Special Provisions.
3. Schedules 1 – Alphabetical Index

Technical Name

A recognized chemical name or microbiological name currently used in scientific and technical handbooks, journals, and texts. Generic descriptions are authorized for use as technical names provided they readily identify the general chemical group, or microbiological group. Technical names are required for some proper shipping names (PSNs).

Template

In DGIS, a user can choose to save as much or as little information entered on a form to be used again in the future. When reusable information is saved, it is called a template.

Trade Direct® Cross Border

UPS ground shipment from the US to Canada and the US to Mexico. Does not include shipment between points within Canada or Mexico, or shipment from Canada to the US or Mexico to the US. For the purposes of DGIS, does not include Air shipments.

Tracking number

The carrier tracking number for that shipment.

Transportation of Dangerous Goods

Canadian government shipping regulations published by Transport Canada (<http://www.tc.gc.ca/>). (see also TDG)

UN

United Nations.

UN standard packaging

A packaging conforming to standards in the UN Recommendations.

UNECE

United Nations Economic Commission for Europe. The UNECE has developed mechanisms for the harmonization of hazard classification criteria and hazard communication tools as well as for transport

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conditions for all modes for transport, in order to ensure consistency between the many regulatory systems. Specific to dangerous goods transport, the UNECE administers the ADR agreement.

UN ID

Every hazardous material has been assigned an ID number in the hazardous material table. A UN ID number means that a specific proper shipping name can be used for both domestic and international shipments. An NA ID number (in 49 CFR only) means that those proper shipping names are not recognized for international transportation and can only be used for transporting within the US and to and from Canada.

UN Number

Four-digit numbers used worldwide in international commerce and transportation to identify hazardous chemicals materials for both US and international shipments. These numbers generally range between 0000 and 3800 and are ideally preceded by the letters UN (for example, UN1005) to avoid confusion with other number codes. (See also NA numbers.)

UOM

Unit of Measure. Used with quantity (Qty).

UPS WorldShip

UPS's shipping management software.

Verification

Provides reviews or tests to verify that software performs as it is designed. Typically, this testing includes:

1. Unit testing.
2. Integration testing.
3. Acceptance testing.
4. Regression testing.