

# Dangerous Goods Awareness Guide for Customers





Do you own a company which ships consumer commodity products? Do you mail holiday or birthday presents? Do you sell products online on e-commerce sites? Do you ship packages via transportation companies such as FedEx? If the answer is yes, then you must determine if the products you are shipping are dangerous goods before you ship them.

Dangerous Goods (DG) are articles or substances capable of posing a risk to health, safety, property, or the environment when transported by air or ground. DG are sometimes referred to as Hazardous Materials.

More than 3 billion tons of regulated DG - including explosive, toxic, corrosive, flammable, and radioactive materials - are transported in the United States each year. Over 300,000 tons of these DG shipments are transported by air.

Before offering a package containing DG to an air carrier for transportation, DG regulations require you, the shipper, to correctly prepare shipments in compliance with all applicable DG regulations. Required elements of correctly prepared DG shipments include accurate classification, proper identification, use of compliant packaging / specific packaging (which is tested to withstand conditions typically encountered during air transportation), and all applicable marking and labeling requirements.

Correctly identifying a DG commodity and preparing it for air transport as required by all applicable DG regulations is crucial to ensuring DG shipments move safely through the FedEx air network. DG marks, labels, and shipping papers such as the Shipper's Declaration for Dangerous Goods form, are all essential components of safe transportation. The visual marks and labels (identifying the potential hazards of a shipment) and shipping papers assist in determining the proper handling and segregation of DG shipments required during transportation. This information is also used to communicate potential hazards on board the aircraft to the flight crew in case of emergency.

Failure to ensure DG shipments are prepared in accordance with all applicable DG regulations and FedEx operator variations can lead to damages to equipment, aircraft, trucks, including potential injuries or death.

All shipments offered to the FedEx air network must be prepared in accordance with the International Civil Aviation Organization (ICAO) Technical Instructions for The Safe Transport of DG by Air, International Air Transport Association (IATA) DGR, applicable State (Country) and FedEx variations. This is required regardless of the possible routing and whether the shipment is physically shipped by air transportation, ground transportation or a combination of both.

Non-compliant DG shipments are shipments which do not comply with all required DG regulations and operator variations. When a shipper offers a shipment to FedEx for transport, FedEx checks the shipment for compliance. If errors are found, the shipment is rejected. It is the shipper's responsibility to correct any non-compliance before re-offering the shipment.

Sometimes customers may offer shipments not declared as containing DG, but the package has one or more visual clues which indicates the shipment could contain DG. Examples of these visual clues are:

- Certain GHS labels (see page 3)
- DG handling label (see page 4)
- Obsolete ORM-D mark (see page 5)
- Ground Limited Quantity Mark (see page 6)
- Partially covered or obscured hazard class labels

These types of non-compliant shipments are subject to rejection even when the shipment does not contain DG. In some cases, these types of shipments must also be reported to the Department of Transportation (DOT). These types of visual clues on packages must be removed or corrected prior to offering the package for transportation.

There are several types of products and other conditions that may indicate the presence of DG:

- **Aerosols, ammunition, batteries (wet and lithium (Li-ion or metal)), camping stove, drain cleaners, dry ice, extracts, fireworks, lighters, matches, oil-based paint or corrosive paint, parts** (with gasoline or kerosene), **perfume, propane, radioactive materials and solvents.**
- **Aerosols and cylinders** – these are under pressure and unless empty or purged, are classified as gases (either non-flammable, flammable or toxic).
- Used parts or equipment that contain fuel or have the residue of fuel.

Most fuels (such as gasoline, kerosene) are flammable and these items are regulated as DG even when emptied of fuel because of remaining odor/residue. In order to send as a non-hazardous item, the equipment must be cleaned and purged of fuel with an appropriate neutralizing agent to nullify the hazard per the requirements in the IATA DG regulations.

- In addition, there are some categories of items that might be considered DG: aircraft/auto parts, camping equipment, carburetor cleaner, frozen food, hand sanitizer, household goods, passenger baggage, swimming pool/spa chemicals, toolboxes, and torches.
- NOTE: Firearms without ammunition are not DG.

Examples of common items that could be considered DG are:



The manufacturer's label located on the product often has visual indications of DG.

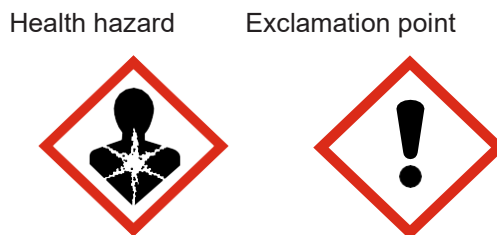
- If the manufacturer's label says "flammable" or "inflammable," which are synonymous, or "corrosive" or "toxic," these are indications that the product is DG.
- Globally Harmonized Labels (GHS labels), also known as pictograms, appear on inner products and sometimes on the outermost packaging, especially single-unit drums and jerrican packaging types.
- GHS labels meet Occupational Safety Health Administration requirements for required safety warnings on products. The presence of the following labels indicates DG (DG):



- The corrosive GHS symbol MAY indicate the presence of DG. The shipper should consult the Safety Data Sheet (SDS), normally found in Section 14 to see if it also meets the definition of a corrosive for transportation. ***The shipper must verify the accuracy of information contained in section 14 by validating the other elements contained within the SDS. Shippers should not rely solely on section 14 as being the correct DG classification for the purpose of shipping.***



- These two GHS labels communicate health hazards but do not usually represent DG. The shipper should consult the SDS.



Be aware of Hazard and Handling Labels. These all indicate a shipment contains DG.

**DG Hazard Labels**

Division 1.4

Division 2.1

Division 2.2

Division 2.3

Class 3

Division 4.1

Division 4.2

Division 4.3

Division 5.1

Division 5.2

Division 6.1

Division 6.2

Class 7 - I White

Class 7 - II Yellow

Class 7 - III Yellow

Criticality Safety Index

Class 8

Class 9

Class 9 Lithium Batteries or Sodium Ion Batteries

Note: FedEx does not accept

**Certain DG Handling Labels**

Marking  
(Marking may be handwritten)

\* Per IATA 7.1.5.3 the Environmentally Hazardous Substance Mark is not required on single packages and combination packages prepared in accordance with Special Provision A197. Therefore, when it appears this is a clue to the carrier that it may be an improperly prepared DG shipment unless there is some indication of A197 in combination with this mark.

Customers that are shipping a product that they received, such as a return of an item ordered, should be aware of all the markings and labels on the product and outermost package.

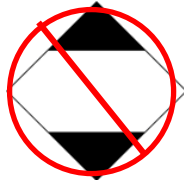
Any of the following clues on the outermost package may indicate the contents are DG that may be regulated and not accepted for FedEx Air Service shipping:

**ORM-D in a rectangle**



The ORM-D mark is now obsolete in 49CFR regulations.

**Limited Quantity Ground Marking**



**Exceptions:**

- (1) Multi-modal shipments \*
- (2) U.S. FedEx Extra Hours service

\* Multi-modal shipments refer to those shipments that require multiple modes of transportation such as air cargo freight as well as a truck carrier.

**Limited Quantity Air Marking**



**UN or ID prefix followed by four-digit number on package**



The presence of a UN or ID number followed by a four digit number indicates the presence of DG and might be regulated.

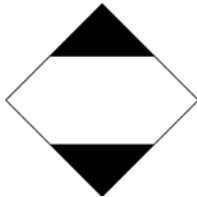
If you are returning a product to a retailer, check all sides of the package. If there are any DG marks, DG labels, or DG paperwork such as the Shipper's Declaration for Dangerous Goods form, these are clues that the package contents are DG. Comply with all IATA DG regulations to properly prepare the shipment.



Check each side of your package to ensure all DG marks, labels and paperwork have been removed before re-using a package for a nonhazardous item. For a nonhazardous item, DG marks, labels and paperwork would not be applicable and are not allowed to be shown. If your new contents are not DG e.g., re-using a box to ship books or clothes, remove DG marks/labels/paperwork.

Reminder: DG marks may be visible in the form of a label, handwritten on the package or be embossed on the package. A most common DG mark is the Limited Quantity mark (either Ground (surface) or air version

Limited Quantity Ground (Surface) Marking



Limited Quantity Air Marking



Product Safety Data Sheets (SDS)

- A product Safety Data Sheet (SDS) provides safety and DG /Hazardous material transportation requirements. Section 14 Transportation of the SDS will include International Air Transport Association/International Civil Aviation Organization (IATA/ICAO) DG requirements for UN/ID number, proper shipping name, hazard Class and if applicable, subsidiary hazard and/or packing group.
- Products that are **not** DG under IATA/ICAO will usually indicate “**non-hazardous,**” or “**not restricted**” or “**not regulated**” next to the IATA/ICAO DG designation (see examples below).

Dangerous Goods SDS Example

14. Transport information	
<b>DOT</b>	
UN Number:	UN 1790
UN Proper Shipping Name:	Hydrofluoric acid
Transport Hazard Class(es)	
Class:	8
Label(s):	8, 6.1
Packing Group:	II
Marine Pollutant:	No
Special precautions for user:	Not determined.
<b>IMDG</b>	
UN Number:	UN 1790
UN Proper Shipping Name:	HYDROFLUORIC ACID (WITH NOT MORE THAN 60% ACID)
Transport Hazard Class(es)	
Class:	8
Label(s):	8, 6.1
EmS No.:	F-A, S-B
Packing Group:	II
Marine Pollutant:	No
Special precautions for user:	Not determined.
<b>IATA</b>	
UN Number:	UN 1790
Proper Shipping Name:	Hydrofluoric acid
Transport Hazard Class(es):	
Class:	8
Label(s):	8, 6.1
Packing Group:	II
Marine Pollutant:	No
Special precautions for user:	Not determined.

Non-Dangerous Goods SDS Example

SECTION 14. TRANSPORT INFORMATION	
International Regulations	
<b>IATA-DGR</b>	Not regulated as a dangerous good
<b>IMDG-Code</b>	Not regulated as a dangerous good
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
Not applicable for product as supplied.	
National Regulations	
<b>TDG</b>	Not regulated as a dangerous good

As the shipper you are ultimately responsible for determining if the package contains DG and to follow all the applicable IATA/ICAO DG regulations when shipping with FedEx. This includes the proper identification, classification, packaging, DG marks and labels, and the Shipper's Declaration for Dangerous Goods form. Although the information in Section 14 is a good starting point, it's possible that errors may appear on a manufacturer's SDS in Section 14 so always review all the data in the SDS in its entirety. **The shipper must verify the accuracy of information contained in section 14 by validating the other elements contained within the SDS. Shippers should not rely solely on section 14 as being the correct DG classification for the purpose of shipping.**

## Shipping Papers

- When completing a paper airbill, answer the question, “Does this package contain DG?”
- Customers using computer systems to prepare shipments must select DG or dry ice as applicable in the automation device used (examples below).

DG on a paper airbill showing “Yes” as per associated shipper’s declaration or Dry Ice “Yes”; the presence of a DG handling code such as “ADG”, “IDG” or “ICE”. This indicates that you selected DG or dry ice in the automation device.

**6 Special Handling and Delivery Signature Options** See us on any Ship Mail® at a Service Office.

<input type="checkbox"/> <b>Satisfactory Delivery</b> We'll mail your item for you. If it's damaged or lost, we'll replace it.	<input type="checkbox"/> <b>Direct Signature</b> We'll mail your item for you. If it's damaged or lost, we'll replace it.
<input type="checkbox"/> <b>No Signature Required</b> We'll mail your item for you. If it's damaged or lost, we'll replace it.	<input type="checkbox"/> <b>Indirect Signature</b> We'll mail your item for you. If it's damaged or lost, we'll replace it.

**Does this shipment contain dangerous goods?**

☐ **No** See us on any Ship Mail® at a Service Office.

☒ **Yes** See us on any Ship Mail® at a Service Office.

☐ **Only by Air** See us on any Ship Mail® at a Service Office.

☒ **Cargo Aircraft Only**

CUSTOMER NO. X00A W-1(98)125 6212  
Branch ID:  
BOLLE, Bruce Lee  
Your City / State/Country Zip/Postal Code

TED  
Restorations Inc.  
7625 Wind Sweeping Downs  
Okey, OK 74446

RMP-352  
RMA  
PC: Eagle

FEB 24 1999  
FEB 24 1999  
FEB 24 1999

FedEx  
Express

TRK# 89XX YY10 2001  
(d43)

9BXKX99 FM  
PRIORITY OVERNIGHT  
ADG  
74446  
OKUS  
TUL

NT RVSA

Enclaf 001000 89XKX99 XXXX

[illegible]

2100101 01 0000 011 0000 335-0112  
 DuPont Nuclear  
 Your City, State/Country ZIP/Postal Code

TO:  
 The Big Green Corp.  
 3 Clonskeagh Square  
 Dublin, Ireland 14000

Ref: 00      000A  
 PTO      Date:

2100101 01 0000 011 0000 335-0112

FedEx  
 Express



89XX YY10 5001  
 0430

89XX09 PM  
 INTL. PRIORITY  
 IDG  
 14000  
 STN

X5 DUBA

2100101 01 0000 011 0000 335-0112

099310 990031 0000A

Alternatively, if you are not shipping DG, these indications should not be indicated on the paperwork.

## IMPROPERLY PREPARED LITHIUM BATTERY SHIPMENTS: SECTION II – UN3090, UN3480



UN 3090 and UN 3480 must be offered as a fully regulated Section IB (or IA) per the IATA DG regulations. Regardless of the Watt hours or gram amount in the batteries, it cannot be offered as a Section II.



## U.S. CUSTOMERS ONLY SECTION

Every shipment offered on a FedEx service must be prepared and offered under the **IATA/ICAO** DG regulations.<sup>2</sup>

When using an approved automation system and the destination zip code is within the United States and an FedEx Air service (e.g. FedEx Express Saver) is used, the automation label will list an E in a rectangle to indicate an FedEx Air Service. In contrast, if offered as a Ground service, the automation label will list a G in a rectangle. See shipping label examples below:

Express Automation Label

ORIGIN ID: XXXX 011 (800) 555-1212 Du Pont Nuclear 345 Main Street Your City, State/Country Zip/Postal Code	SHIP DATE: 99XXXX9 ACTUAL WGT: 110 LBS MAX-91 Account# 5 System# 001255FARS2300 BILL TO: RSCN REF: 0 38115 470
TO: The Big Green Corp. 3 Clonskeagh Square Dublin, Ireland 14000	
Ref: DO REV: PO RMA: Date:	
	
TRK# 89XX YY10 5001 0430	99XXXX9 PM INTL PRIORITY IDG 14000 IE STN
<b>X5 DUBA</b>	
	
Empl# 999999 99XXXX XXXX	

Ground Automation Label

FROM: PETRA VALUGHN 302000 TEST FEDEX ACP 30 FEDER PKWY COLLIERVILLE TN 38017	(000) 000-0000 SHIP DATE: 200402 ACTUAL WGT: 100 LBS CAG: 001484747001 BILL TO: RSCN
TO: PETRA'S SHOP 3505 RIVERDALE RD  MEMPHIS TN 38115 (959) 999-9999	
	
TRK# 5714 8981 6470	HAZ DSR 38115
9622 0302 0 (000 000 0000) 0 00 5714 8981 6470	
	

This Limited Quantity Ground package mark is not allowed by itself on an Air shipment with FedEx Air Service. \* FedEx IATA shipments offered as Limited Quantity require a (Y prefix Packing Instruction), Y symbol in the center of the mark. Additionally, the Shipper's Declaration for Dangerous Goods form, a hazard label, and all required DG marks (UN or ID number, Proper Shipping Name etc.), and any required DG handling labels are also required on the air Limited Quantity package.



### Limited Quantity Ground Package

\* Exception: US FedEx Extra Hours service

<sup>2</sup> There are some limited exceptions for shipments which are accepted under 49CFR as prepared by air outlined in the 2024 IATA FX variation FX 02-(f)."

## RESOURCES SECTION

Customer resources available for DG Shipping. Refer to the following:

- DOT/ PHMSA website for brochures on proper preparation to assist you with your shipments.  
DOT/PHMSA Hazardous Materials Information Center 1.800.467.4922.  
<https://www.phmsa.dot.gov/>  
<https://www.faa.gov/hazmat/safecargo>
- FedEx Service Guide, Terms and Conditions  
[Service Guide 2022.pdf \(fedex.com\)](#)
- FedEx DG seminars within the US: <https://fedex.registration.meetingevolution.net/>
- FedEx brochures:  
[Shipping-Dangerous-Goods-With-FedEx.pdf](#)  
[Microsoft Word - 2022 DGShipper JobAid.docx \(fedex.com\)](#)  
[Dry Ice Job Aid.pdf \(fedex.com\)](#)  
[Dry Ice Job Aid Intl.pdf \(fedex.com\)](#)  
[LithiumBattery JobAid.pdf \(fedex.com\)](#)  
[LithiumBattery Overview 2022.pdf \(fedex.com\)](#)
- For questions or assistance, refer customers to the FedEx Dangerous Goods/Hazardous Materials hotline 1.800.Go.FedEx and say “dangerous goods” or press 81, then press “4” for the next available DG agent. Non-U.S. locations may call 1.901.375.6806, then press “4”.
- For information on FedEx Ground hazardous materials shipments refer to [fedex.com](https://www.fedex.com) and use “hazardous materials” in the search field.