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## **PARTICIPANT MANUAL**

# **SHIPPING AVIAN INFLUENZA SAMPLES BY INTERNATIONAL AIR: INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA) DANGEROUS GOODS REGULATIONS**

**2009**

### **DISCLAIMER**

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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# SHIPPING AVIAN INFLUENZA SAMPLES BY INTERNATIONAL AIR:

International Air Transport Association (IATA)

## Dangerous Goods Regulations

### **PURPOSE**

To train personnel responsible for preparing and packaging infectious substances to be able to comply with regulations established by the International Air Transport Association (IATA) for the international air shipment of infectious substances, IATA Dangerous Goods Class 6.2.

### **COURSE OBJECTIVES**

By the end of this course participants will be able to:

1. Describe the applicable regulations and classifications defined by the IATA Dangerous Goods Regulations;
2. Explain the IATA regulations applicable to shipment of infectious substances by international air;
3. Demonstrate the ability to apply relevant IATA Dangerous Goods Regulations for the purpose of:
  - classifying,
  - documenting,
  - packing, and
  - labelinginfectious substances for shipment by international air.
4. Describe the emergency procedures to follow in the event of an accident with a shipment of an infectious substance.

### **ADDITIONAL INFORMATION**

1. The IATA Dangerous Goods Regulations (DGR) specify that training must include:
  - general familiarization with IATA DGR provisions,

- function-specific training on tasks the staff will carry out, and
  - safety training for handling dangerous goods and responding to accidents or emergencies involving these goods.
2. This training will train you as a Shipper of Infectious Substances, such as avian influenza samples, **only**.
  3. If you need to ship other Dangerous Goods, you will need additional training.
  4. The Shipper must renew this training every 24 months to stay qualified to ship avian influenza samples and other infectious substances according to IATA DGR.
  5. The IATA DGR also require that trainees be **tested** to verify their understanding of the regulations, and that a record of successful course completion be kept on file.
    - There will be a final, written exam that will be scored. Only those who receive a score of **85%** or higher will receive a record of successful training completion

AGENDA

Session 1	Session 2	Session 3	Session 4
<p><b>Introductions</b>  <b>Course Objectives</b>  <b>Overview of IATA DGR</b></p>	<p><b>Classifying Infectious Substances for Shipment by International Air</b></p>	<p><b>Completing Documentation to Ship Infectious Substances by International Air</b></p>	<p><b>Packing Infectious Substances for Shipment by International Air</b></p>
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## KEY TERMS AND ACRONYMS

### Terms

**Avian Influenza** – a respiratory infection caused by influenza viruses that occur naturally in birds, and less commonly in pigs and humans; there are both highly pathogenic and low pathogenic strains of the avian influenza virus

**Cargo Aircraft** – any aircraft other than a passenger aircraft which is carrying goods or property (from IATA DGR)

**Category A** – An infectious substance which is transported in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals (from IATA DGR)

**Category B** – An infectious substance which does not meet the criteria for inclusion in Category A (from IATA DGR)

**Consignee** – any person, organization or government which is entitled to take delivery of a dangerous goods package (from IATA DGR)

**Consignment** – one or more packages of dangerous goods accepted by an operator from a shipper at one time and one address for transport to one consignee at one destination address (adapted from IATA DGR)

**Dangerous Goods** -- articles or substances which are capable of posing a risk to health, safety, property or the environment... (from IATA DGR)

**Dry Ice (also called Carbon Dioxide- solid)** – produced by expanding liquid carbon dioxide to vapor and snow in presses that compact it into blocks; used primarily for cooling; converts directly to gaseous carbon dioxide (adapted from IATA DGR)

**Infectious Substance** – substances which are known or are reasonably expected to contain pathogens, micro-organisms (including bacteria, viruses, rickettsiae, parasites, fungi) and other agents such as prions, which can cause disease in humans or animals (from IATA DGR)

**Overpack** – a container used by a single shipper to contain one or more packages and to form one handling unit for shipment (adapted from IATA DGR)

**Packing Instruction** – the specific requirements defined by the IATA DGR for a packing a particular substance for air shipment

**Packing Group** – an indication of the relative degree of danger presented by the articles and substances (adapted from IATA DGR)

**UN Number** – the 4-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances (from IATA DGR)

**Waybill** – the document issued by the operator for a single shipment that details of the contents, delivery address, transport route, charges and other information; typically includes a unique waybill number that is used to track the shipment while it is en route to its destination

Acronyms

**AI** – Avian Influenza

**DGR** – Dangerous Goods Regulations

**FAO** – Food and Agriculture Organization

**HPAI** – Highly Pathogenic Avian Influenza

**IATA** – International Air Transport Association

**ICAO** – International Civil Aviation Organization

**OIE** – World Organization for Animal Health

**UN** – United Nations

**USAID** – United States Agency for International Development

**WHO** – World Health Organization

Additional Information and Resources

IATA information and resources: [www.iata.org](http://www.iata.org)

FAO information and resources: [www.fao.org/avianflu/en/](http://www.fao.org/avianflu/en/)

WHO information and resources: [www.who.int/csr/disease/avian\\_influenza/en/index.html](http://www.who.int/csr/disease/avian_influenza/en/index.html)

# AN OVERVIEW OF IATA AND IATA DANGEROUS GOODS REGULATIONS

## ***MODULE PURPOSE***

To learn essential information about IATA and IATA Dangerous Goods Regulations (DGR), including key terms and definitions and applicable IATA requirements.

## ***MODULE OBJECTIVES***

At the end of this session, you will be able to:

- 1) Explain what IATA is, what the IATA DGR are, and why the IATA DGR are important;
- 2) Explain why IATA regulations are applicable to personnel responsible for knowing how to correctly ship infectious substances, including HPAI samples, by international air;
- 3) Define essential terms and acronyms and explain their relevance.



## WHAT IS IATA?

The International Air Transport Association (IATA) is the trade association of the world's major airlines. IATA works closely with the International Civil Aviation Organization (ICAO) in establishing requirements for the air transport of dangerous goods. The ICAO is the body of the United Nations that governs all international civil aviation matters (adapted from SAFTPAK Shipping Class 6.2 Dangerous Goods Compliance Training Reference Manual 2007).

## WHAT ARE DANGEROUS GOODS?

Dangerous Goods are articles or substances that are capable of posing a risk to health, safety, property or the environment, and are shown in the list of dangerous goods in the IATA Regulations, **or** are classified according to IATA Regulations (adapted from IATA DGR 49<sup>th</sup> ).

## WHAT ARE IATA DANGEROUS GOODS REGULATIONS?

The IATA *Dangerous Goods Regulations (DGR)* are updated and published every year to outline the current procedures by which articles and substances with hazardous properties can be safely transported by air on all commercial air transport. Because they are updated each year, each

edition of the *DGR* is effective for only one year. To stay current, users must purchase and carefully review each new edition of the *DGR*. The *DGR* and related publications can be purchased directly from IATA. You can find cost, ordering and other information at [www.iata.org](http://www.iata.org).

## **WHAT ARE IATA'S TRAINING REQUIREMENTS FOR PERSONNEL INVOLVED IN THE SHIPMENT OF DANGEROUS GOODS?**

The IATA DGR require that personnel receive training appropriate to their responsibilities. The training must include:

- a) general familiarization with the IATA DGR and their requirements
- b) function-specific instruction on the tasks that the trainee is responsible for carrying out
- c) safety procedures for handling and responding to emergencies involving dangerous goods.

Trainees must be tested to verify their understanding of the materials, and a record of their successful completion of the training course must be maintained.

Personnel must renew their training within 24 months to ensure that their knowledge is current. (adapted from IATA DGR 49<sup>th</sup> Edition).

## **WHAT ARE INFECTIOUS SUBSTANCES?**

Infectious substances are substances that are known or are reasonably expected to contain micro-organisms (including bacteria, viruses, rickettsiae, parasites, fungi) and other agents such as prions that can cause disease in humans or animals.

## **WHAT IS AVIAN INFLUENZA?**

Commonly called “bird flu”, avian influenza is a respiratory infection caused by influenza viruses that occur naturally in birds, and less commonly in pigs and humans. Poultry exposed to infected manure become infected with avian influenza. Humans exposed to animals infected with avian influenza can also become infected. There are both highly pathogenic and low pathogenic strains of the avian influenza virus. There is now an epidemic of highly pathogenic avian influenza (HPAI) caused by the virus type H5N1.

## **WHY MUST YOU SHIP AVIAN INFLUENZA SAMPLES BY INTERNATIONAL AIR?**

The World Organization for Animal Health (OIE) and the Food and Agriculture Organization (FAO) have designated certain international reference laboratories as those qualified to definitively confirm the presence of the H5N1 HPAI virus in a specimen taken from a bird or other animal.

Other national, regional and international laboratories are qualified to screen for the H5N1 virus. An international reference laboratory designated by OIE/FAO must issue a diagnosis in order for the diagnosis results to be recognized by the international community.

The World Health Organization (WHO) has designated certain international medical laboratories as those qualified to definitively confirm the presence of the H5N1 HPAI virus in a human sample.

OIE/FAO and WHO are also the international bodies responsible for tracking the HPAI virus and its spread and mutation over time. It is important that authorities in any country that suspects the presence of H5N1 virus in animals or humans send samples to the international reference laboratories for confirmation and record-keeping.

Refer to Annexes A & B for current lists of laboratories and their shipping addresses and contact information.

### **WHAT ARE THE SHIPPER'S RESPONSIBILITIES?**

A shipper must comply fully with the IATA DGR when offering a consignment of dangerous goods to airlines. In addition, shippers must comply with any applicable regulations of the country of origin, transit and destination (adapted from IATA DGR 49<sup>TH</sup> edition).

The shipper must classify, identify, select proper packaging, package, mark and label, document and make arrangements for the shipment.

The shipper must also retain all documents relevant to the shipment of dangerous goods, including a copy of the Shipper's Declaration, for a minimum of 3 months after the shipment.

### **WHAT CAN HAPPEN IF THE SHIPPER FAILS TO CORRECTLY PREPARE AN INFECTIOUS SUBSTANCE FOR INTERNATIONAL AIR SHIPMENT?**

The shipper's failure to correctly classify, document, pack or label infectious substances can result in

- fines
- legal penalties
- the operator's refusal to accept the package for shipment.

### **WHAT ARE THE OPERATOR'S RESPONSIBILITIES?**

The operator is the person who is trained and authorized to accept the package for transport. Before accepting the package, the operator must inspect the documentation, packaging, marking and labeling. Once the package is accepted, the operator must properly store, load, transport and deliver the package to the person listed as the consignee for the delivery.

The operator has the right to open and inspect a package before accepting it for shipment.

#### **IMPORTANT POINT**

The operator has the right to refuse to accept a package if it is found not to be in compliance with applicable IATA DGR.

## **INDIVIDUAL REFLECTION WORKSHEET**

1. How familiar are you with the IATA DGRs? Are they used in your workplace?

2. Which of the shipper's responsibilities will be/ are most challenging for you? Why?

What additional information do you need on this module?

**NOTES**

# CLASSIFICATION

## **MODULE PURPOSE**

To learn why and how substances must be properly classified for shipment by international air according to the IATA DGR.

## **MODULE OBJECTIVES**

At the end of this session, you will be able to:

- 1) Define the three major categories of infectious substances
- 2) Explain why correct classification is important when you are preparing HPAI samples and other infectious substances for shipment by international air
- 3) Correctly classify different substances for international air shipment

## WHAT ARE THE MAIN CATEGORIES OF INFECTIOUS SUBSTANCES?

IATA divides Dangerous Goods into 9 different classes.

Class 1 – Explosives  
Class 2 – Gasses  
Class 3 – Flammable Liquids  
Class 4 – Flammable Solids (spontaneous combustion)  
Class 5 – Oxidizing Substances  
**Class 6 – Toxic (6.1) and Infectious Substances (6.2)**  
Class 7 – Radioactive Material  
Class 8 – Corrosives  
Class 9 – Miscellaneous Dangerous Goods  
e.g. dry ice (carbon dioxide – solid)

### **Infectious substances are listed by IATA in Class 6.2.**

Within Class 6.2 there are two main categories, Category A and Category B. Substances that do not fall into either category are said to be Exempt from the regulations that apply to those two categories.

Correctly classifying a substance as Category A, Category B or Exempt is very important. This determines which of the IATA regulations you must follow in order to properly pack and ship the substance by international air.

**Category A** – an infectious substance which is transported in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in healthy humans or animals.

**Category B** – an infectious substance which does not meet the criteria to be in Category A.

**Exempt** – substances which do not contain infectious substances or substances which are unlikely to cause disease in humans or animals are not subject to the IATA regulations unless they meet the criteria for inclusion in another class.

**Patient Specimens** – a type of infectious substance, patient specimens are those collected directly from humans or animals, including, but not limited to, excreta, secretions, blood and its components, tissue for purposes such as research, diagnosis, investigational activities, disease treatment and prevention.

(adapted from IATA DGR 49<sup>th</sup> Edition)

## HOW DO I DETERMINE WHETHER A SUBSTANCE IS A CATEGORY A OR B OR IS EXEMPT?

Any substance that might meet the criteria that define Category A must be classified as Category A.

If the shipper is certain that the substance does not meet Category A criteria, it can be classified as Category B.

If the shipper is certain that the substance does not meet the criteria for Category A or B or any other IATA DGR class, it can be classified as Exempt.

### IMPORTANT POINT

If there is any doubt about whether the substance is Category A or B, or, if in the judgment of the shipper the substance may pose unacceptable risks if shipped under any other classification, the substance must be packed, labeled and shipped as a Category A substance.

See Appendix C for a list of Category A and Category B substances.

### WHAT ADDITIONAL REGULATIONS APPLY IF A SUBSTANCE IS SHIPPED WITH DRY ICE?

Dry ice (carbon dioxide, solid) falls within IATA Class 9 as a Miscellaneous Dangerous Good. Class 9 substances and articles are those which, during air transport, present a danger not covered by other classes (adapted from IATA DGR 49<sup>TH</sup> edition).

### WHAT ARE UN CODES?

The United Nations (UN) Committee of Experts on the Transport of Dangerous Goods assigns a four-digit number to identify a substance or a particular group of substances. The prefix UN must always be used with these numbers. (adapted from IATA DGR 49<sup>TH</sup> edition)

The numbers are assigned based on the Category, the known medical history and the symptoms of the source human or animal, the endemic local conditions, and the shipper's professional judgment.

**UN2814** – for infectious substances that meet the criteria for Category A, and can cause disease in humans *or* in humans and animals.

**UN2900** – for infectious substances that meet the criteria for Category A that cause disease *only* in animals.

**UN3373** – for infectious substances classified as Category B.

**UN1845** – for packages that include dry ice.

### WHAT ARE PACKING INSTRUCTIONS?

Each infectious substance category has distinct Packing Instructions (PI) which are specific instructions on how you must pack items. These PI are regulated by IATA.

Category A substances must be packed according to **PI 602**.

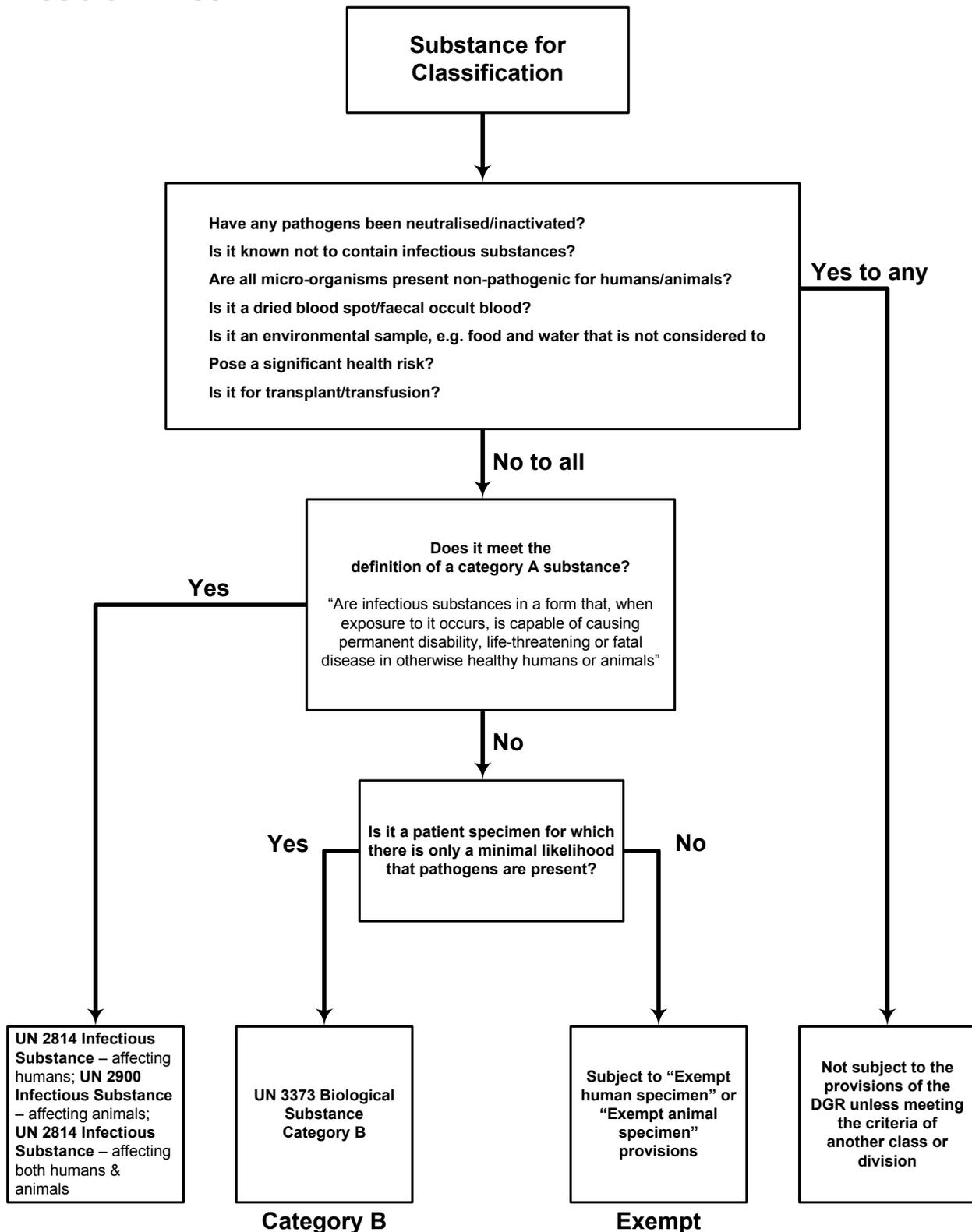
Category B substances must be packed according to **PI 650**.

Packages that include dry ice must be packed according to **PI 904**.

Exempt substances are not subject to IATA DGR. Exempt patient or animal substances, however, must still meet certain packing requirements in order to be transported by air.

*Refer to Section 4 below for more information related to packing infectious substances and dangerous goods.*

# Infectious Substance Classification for International Air Shipment Decision Tree



## INDIVIDUAL REFLECTION WORKSHEET

What are **three** points you want to remember from this module?

1.

2.

3.

What additional information do you need on this module?

**NOTES**

# DOCUMENTATION

## **MODULE PURPOSE**

To learn why and how to complete documentation required for shipping an infectious substance by international air according to the IATA DGR.

## **MODULE OBJECTIVES**

Objectives: At the end of this session, you will be able to:

- 1) Explain the role of each of the individuals whose names and contact information appears on the Shippers Declaration for Dangerous Goods form;
- 2) Explain the implications of the warning and the declaration on the form;
- 3) Correctly fill out the Shippers Declaration form.

**SHIPPER'S DECLARATION FOR DANGEROUS GOODS**

Shipper		Air Waybill No.				
		Page ___ of ___ Pages				
		Shipper's Reference Number (optional)				
Consignee						
Name and Number of Person Responsible for class 6.2 shipment						
Two completed and signed copies of this Declaration must be forwarded to the operator		<b>WARNING</b> Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consolidator, a forwarder or an IATA cargo agent.				
<b>TRANSPORT DETAILS</b>						
This shipment is within the limitations prescribed for: (delete non-applicable)		Airport of Departure				
PASSENGER AND CARGO AIRCRAFT	CARGO AIRCRAFT ONLY					
Airport of Destination		Shipment type: (delete non-applicable) NON-RADIOACTIVE <del>RADIOACTIVE</del>				
<b>NATURE AND QUANTITY OF DANGEROUS GOODS</b>						
Dangerous Goods identifier						
UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary risk)	Packing Group	Quantity and type of Packing	Packing Inst.	Author-ization
UN2814	Infectious substance, affecting humans ( )	6.2		mL	602	
UN1845	Dry Ice	9	III	kg ALL Packed in one fibreboard box	904	
Additional Handling Information						
24-hour Emergency contact _____						
I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.				Name/Title of Signatory		
I declare that all of the applicable air transport requirements have been met.				Place and Date		
				Signature (see warning above)		

## **WHAT IS THE SHIPPER'S DECLARATION FORM?**

The Shipper's Declaration form is required documentation for the international air shipment of infectious substances. It can only be completed and signed by the shipper. Once signed, it becomes a legal document that holds the shipper responsible for all information provided on the form.

It is very important that the information on the form be complete, accurate, legible, and written in or officially translated into English.

The shipper must complete and sign two copies of the Declaration form to present to the operator along with the package for shipment.

IATA regulations require that the shipper retain the Declaration and all relevant documents on file for at least 3 months after submitting the package for shipment.

## **WHAT DOES THE SHIPPER DECLARE?**

By signing the Shipper's Declaration form once it is complete, the shipper declares that the contents of the consignment are fully and accurately described on the form by the proper shipping name; are correctly classified, packaged, marked and labeled; and are in proper condition for transport, according to all applicable international and national government regulations.

## **WHAT IS THE WARNING THAT APPLIES TO THE SHIPPER?**

The Shipper's Declaration form carries a Warning that reads: "Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties..."

## **WHO IS THE CONSIGNEE?**

The consignee is the person, organization or government office that is entitled to receive delivery of the shipment. The individual representative authorized to receive the delivery must be named and specific contact information provided on the form.

The consignee receives the shipment and has the authority to unpack and handle the infectious substance it contains.

The consignee must arrange for any permits necessary to ensure the safe and timely arrival of the shipment.

## **WHAT STEPS MUST THE SHIPPER TAKE BEFORE MAKING THE SHIPMENT?**

**It is important that the shipper make contact with the consignee in advance of the shipment.** While shipment arrangements are being finalized, the shipper must contact the

consignee to notify him/her that the shipment is being sent. The shipper should provide information about the shipment's contents, as well as transport details such as date, time of expected arrival and the name of the carrier or handling agency involved.

It is the shipper's responsibility to secure any export permits required. The shipper is also responsible for making sure that the consignee has obtained all necessary import permits required (adapted from SAFTPAK Shipping Class 6.2 Dangerous Goods Compliance Training Reference Manual 2007).

## **WHO IS THE EMERGENCY CONTACT?**

The emergency contact is the individual authorized and designated to be responsible for the shipment while it is being transported, between the time that it has been released by the shipper and the time that it received by the Consignee.

### **IMPORTANT POINT**

The emergency contact **must** have a telephone at which he or she can be reached **24-hours** a day while the shipment is being transported.

In the event of incident involving the shipment, the operator will call the emergency contact to request required information or action. The emergency contact must be authorized and able to quickly respond as necessary.

## **WHAT IS A PROPER SHIPPING NAME?**

Each type of dangerous good regulated by IATA has a proper shipping name. There is only one proper shipping name for each type of substance. This must be spelled correctly and written in bold or dark ink on the Shipper's Declaration form.

For a Category A infectious substance, the proper shipping name is either:

Infectious Substance, affecting humans (for UN 2814 substances) **or** Infectious Substance, affecting animals (for UN 2900 substances).

If the Category A infectious substance affects both humans and animals, the proper shipping name is Infectious Substance, affecting humans (UN 2814).

For a Category B infectious substance, the proper shipping name is Biological Substance, Category B (UN 3373).

When shipping Category A infectious substances, in addition to the proper shipping name, the substance's technical name must be written in parentheses.

The technical name is a recognized name used in scientific and technical handbooks, texts or journals.

For example: for avian influenza samples, the proper shipping name is Infectious Substance, affecting humans (Highly Pathogenic Avian Influenza Virus).

### WHAT IS A PACKING GROUP?

Packing Group numbers I, II or III are assigned to several classes of dangerous goods, including dangerous goods in Classes 6 and 9. The group is assigned according to the relative degree of danger presented by the article or substance.

Packing Group I – substances presenting high danger

Packing Group II – substances presenting medium danger

Packing Group III – substances presenting low danger

Dry ice is assigned to Packing Group III.

Packing Groups are not applicable to infectious substances.

### IS THERE A LIMIT TO THE QUANTITY OF AN INFECTIOUS SUBSTANCE THAT CAN BE SHIPPED?

Yes. IATA regulates the amount of substance that can be shipped. The maximum amount depends on the substance's Category and on the type of aircraft used for the shipment

Shipments by cargo aircraft can contain a larger quantity than shipments by passenger aircraft.

UN Number	Proper shipping name	Class	Maximum Passenger Aircraft	Maximum Cargo Aircraft
2900	Infectious substance, affecting animals only	6.2	50 mL for liquids	4 L
2900	Infectious substance, affecting animals only	6.2	50 g for solids	4 kg
2814	Infectious substance, affecting humans	6.2	50 mL for liquids	4 L
2814	Infectious substance, affecting humans	6.2	50 g for solids	4 kg

## INDIVIDUAL REFLECTION WORKSHEET

What are **three** points you want to remember from this module?

1.

2.

3.

What additional information do you need on this module?

**NOTES**

# PACKING

## **MODULE PURPOSE**

To learn why and how to pack an infectious substance for shipment by international air according to the IATA DGR.

## **MODULE OBJECTIVES**

Objectives: At the end of this session, you will be able to:

- 1) Explain the components of packing materials and the sequence to follow in packing a Category A infectious substance;
- 2) Explain why and how to use dry ice, wet ice or cold packs for the shipment;
- 3) Correctly pack an infectious substance for shipment by international air.



Above is the type of outer packaging that is produced by SAFTPAK for the shipment of infectious substances.

### **WHAT ARE THE PACKING REQUIREMENTS FOR PACKING INSTRUCTION (PI) 602 AND PI 650?**

IATA general requirements stipulate that the packages must be prepared in such a manner that they arrive at their destination in good condition and present no hazard to person or animals during transport.

Both PI 602 and PI 650 require triple packaging. The packaging must include:

- a) inner packaging comprised of
  - watertight primary receptacle, and
  - watertight secondary packaging, and
  - if the substance is in liquid form, the packaging must include absorbent material in sufficient quantity to absorb the entire content,
- b) an itemized list of the contents
- c) a rigid outer packing of adequate strength for its capacity, weight and intended use. The smallest external dimension must be of at least 100mm.

The packaging must be capable of withstanding, without leakage, an internal pressure of at least 95 kPa and temperatures between -40 degrees C and 55 degrees C.

Exempt patient or animal specimens must also follow these requirements.

**IS THERE ANY DIFFERENCE BETWEEN THE PACKAGING REQUIREMENTS FOR CATEGORY A, CATEGORY B, AND EXEMPT SUBSTANCES?**

The packing requirements for Category A and Category B infectious substances and for Exempt patient or animal substance are the same. The labeling requirements for the outer-packaging of each of these substances, however, are different.

Refer to Section 5 below for more information related to labeling infectious substances for shipment by air.

**WHAT OTHER REQUIREMENTS APPLY IF REFRIGERANTS SUCH AS WET ICE, PRE-FROZEN PACKS OR DRY ICE ARE INCLUDED IN THE SHIPMENT?**

Refrigerants must be placed around the secondary packaging. If wet ice or frozen packs are used, the outer packaging must be leak-proof.

The primary receptacle and secondary packaging must maintain their integrity at the temperature of the refrigerant used (adapted from IATA DGR 49<sup>th</sup> edition).



This is the primary receptacle that is included in the SAFTPAK shipping materials. Once properly sealed, it is watertight.



DuPont™  
**Tyvek**®  
Protect What's Outside.™

**BIOHAZARD**

**Instructions**

- Place specimen and absorbent into STP-711.
- Follow instructions on STP-711 to properly seal it.
- Place STP-711 into the STP-710.
- Seal the STP-710.
- Write "Itemized List" on STP-710 along with any special instructions.

Itemized List of Contents & Special handling Instructions

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+ (780) 486-0211  
1-800-814-7484  
Fax: + (780) 486-0235  
www.saftpak.com



Reorder Part Number STP-710

This is the secondary packaging that is included in the SAFTPAK shipping materials. A detailed list of contents can be written directly on this package.

## **WHAT SPECIAL PRECAUTIONS MUST BE TAKEN WHEN DRY ICE IS INCLUDED IN THE SHIPMENT?**

Dry Ice is a hazard!

When dry ice sublimates, it forms a carbon dioxide gas that is odorless, tasteless and can cause death by asphyxiation. As dry ice becomes a gas, its volume also increases significantly.

### **IMPORTANT POINT**

Shipments that contain Dry Ice must allow for ventilation at all times to allow for dissipation of the gas. **Dry Ice should never be shipped in a sealed container.**

## INDIVIDUAL REFLECTION WORKSHEET

What are **three** points you want to remember from this module?

1.

2.

3.

What additional information do you need on this module?

**NOTES**

# LABELING

## **MODULE PURPOSE**

To learn why and how to label a package that contains an infectious substance for shipment by international air according to the IATA DGR.

## **MODULE OBJECTIVES**

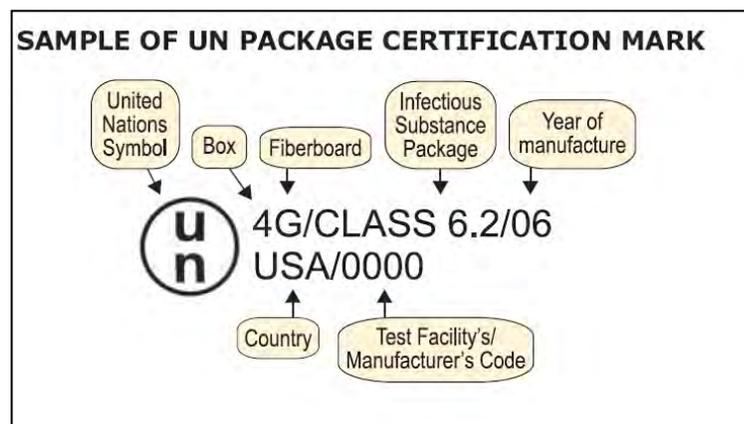
Objectives: At the end of this session, you will be able to:

- 1) Explain the components of packing materials and the sequence to follow in packing a Category A infectious substance;
- 2) Explain why and how to use dry ice, wet ice or cold packs for the shipment;
- 3) Correctly pack an infectious substance for shipment by international air.

## HOW MUST THE OUTSIDE OF A PACKAGE CONTAINING DANGEROUS GOODS BE MARKED FOR INTERNATIONAL AIR SHIPMENT?

Each package must be marked durably and legibly on the outside of the package with each of the following:

- a) the proper shipping name and corresponding UN Number
- b) the full name and address of the shipper and the consignee
- c) the net quantity of dangerous goods contained for consignments of more than one package (where the weight on the Shipper's Declaration is a gross weight, the Gross Weight of the package must be shown, and the letter G must be written on the package)
- d) when packing UN1845 substances, the Net Quantity of dangerous goods contained in each package must be written on the package
- e) when packing infectious substances, the name and telephone number of the responsible person (Emergency Contact) must be written on the package
- f) when packaging UN 3373 substances, Biological Substance, Category B must be written on the package



The outer packaging must bear the UN Package Certification Mark or UN Specification Mark such as the one above.

## HOW MUST PACKAGES CONTAINING INFECTIOUS SUBSTANCES BE LABELED FOR INTERNATIONAL AIR SHIPMENT?

Labels used on outer packages must conform in shape, color, format, symbol and text to the specimen designs approved by IATA.



**Place label in the upper right quadrant of box.**

Packages containing Class 6 Infectious Substances must have a Class 6 Infectious Substance label that looks like the one pictured above.

Quantity \_\_\_\_ ml/gm

**Fill in and place next to and to the left of the Class 6 label**

Sender: \_\_\_\_\_  
\_\_\_\_\_  
Ph: \_\_\_\_\_

**Fill in and place in upper left hand corner of box**

Person Responsible  
NAME: \_\_\_\_\_  
PHONE: \_\_\_\_\_

**Fill in Emergency contact -- must be available 24 hours a day until the shipment is received by the consignee**

**DRY ICE**  
**UN 1845**  
\_\_\_\_\_ **KG NET WT**

PM210 SAF-PAK

Fill in the Kg Net Weight and place where visible on outer package

**UN2814**  
**Infectious Substance,**  
**Affecting Humans**  
( )  
( )  
**UN2814**  
**Infectious Substance,**  
**Affecting Humans**

Fill in Technical Name and place where visible on outer package

**Consignee:**  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
PH: \_\_\_\_\_

**SAFOPAK**  
INC.

Re-Order Part # STP-808

Fill in Consignee full name, street address and phone number and place below sender label in upper left hand corner of .

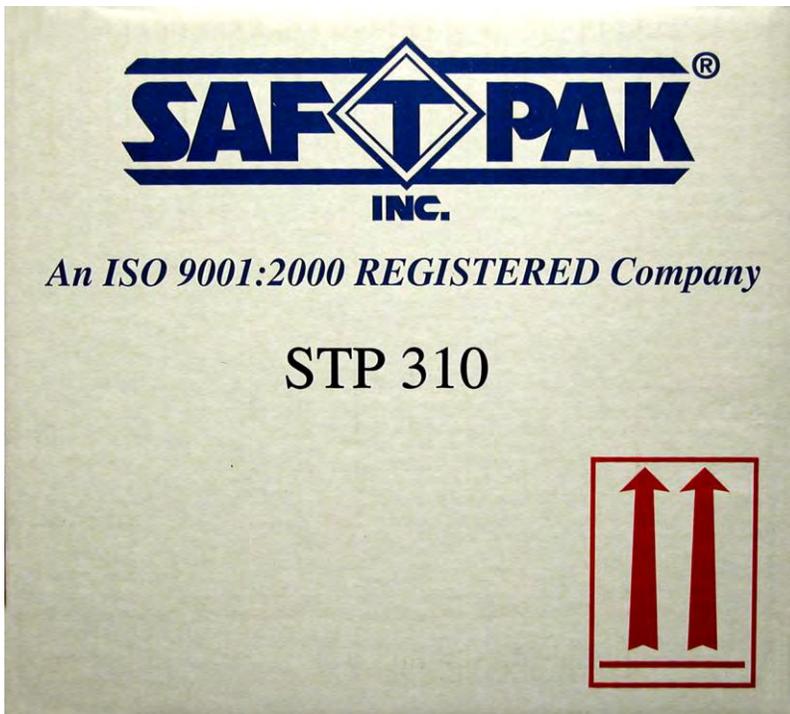
OVERPACK

The “overpack label” must be clearly visible on the package.

This label must be used for overpacks.



Place this label on the outer packaging only when the package is shipped by cargo aircraft



Two arrows pointing in the upright position must be visible on at least 2 sides of the outer packaging.

## Class A infectious

**Shipper information – name and telephone number of the person responsible for the Class 6.2 shipment**

**Consignee information - name and telephone number**

**Emergency contact and telephone number**

**Overpack label if**

**UN compliant packaging certification**

**The proper shipping name, technical name and UN classification number – in this case UN 2814 for an infectious substance affecting humans**

**Class 6 “Infectious Substance” label**

**The amount of infectious substance in mls or gms being**

**Dry Ice Marking with UN 1845 and the net weight of dry ice in the box**

**Class 9 “Miscellaneous” label for dry ice shipments**

**Shipper:**  
PH: SAF-T-PAK Re-Order Part # STP-007

**Consignee:**  
PH: SAF-T-PAK Re-Order Part # STP-008

PERSON RESPONSIBLE (NAME & NUMBER):

**OVERPACK**

QUANTITY:

**DRY ICE UN 1845**  
KG NET WT

**TC-125-1A/8-37**  
REGISTERED WITH TRANSPORT CANADA  
ENREGISTRÉ À TRANSPORTS CANADA

**UN 4G CLASS 6.2/06**  
CAN/8-37 SAF-T-PAK

**INFECTIONIOUS SUBSTANCE AFFECTING HUMANS**

**INFECTIONIOUS SUBSTANCE**  
IN CASE OF DAMAGE OR LEAKAGE  
IMMEDIATELY NOTIFY  
PUBLIC HEALTH AUTHORITY  
IN U.S.A.  
NOTIFY DIRECTOR - CDC  
ATLANTA, GA  
1-800-232-7175  
**6**

**CLASS 9**

### Example of a package used for shipment of a Category A infectious

The outer packing of a correctly marked and labeled package of Category A infectious substance packaged for shipment by international air looks like the package pictured above.

## INDIVIDUAL REFLECTION WORKSHEET

What are **three** points you want to remember from this module?

1.

2.

3.

What additional information do you need on this module?

**NOTES**

# CLASSIFYING, DOCUMENTING, PACKING, LABELING EXERCISE

## **MODULE PURPOSE**

To demonstrate, by correctly completing a practical exercise knowledge, of how to correctly classify, document, pack, and label an infectious substance for shipment by international air.

## **MODULE OBJECTIVES**

Objectives: At the end of this session, you will be able to:

- 1) Make correct decisions and perform applicable procedures related to classification, documentation, packaging and labeling;
- 2) Use their materials as reference to find the information they need
- 3) Explain what is required to prepare a package for shipment.

## INDIVIDUAL REFLECTION WORKSHEET

What are **three** points you want to remember from this module?

1.

2.

3.

What additional information do you need on this module?

**NOTES**

# EMERGENCY PROCEDURES

## **MODULE PURPOSE**

To learn the critical response procedures required of a shipper of an infectious substance in the event of a leak, spill or accident involving an infectious substance.

## **MODULE OBJECTIVES**

Objectives: At the end of this session, you will be able to:

- 1) Explain the shipper's potential role in the event of leakage or spill of an infectious substance package;
- 2) Explain the potential risks and hazards and how to avoid them;
- 3) Safely and correctly respond to an accident involving an infectious substance during shipment.

## **WHAT IS THE RESPONSIBILITY OF THE SHIPPER IN THE EVENT OF AN ACCIDENT OR SPILL?**

As a shipper you may be called, by the carrier or freight forwarder, to assist if there is an accident with your shipment or someone else's.

## **WHAT SHOULD YOU DO IN THE EVENT OF A SPILL OR LEAK?**

**Advise all present not to clean-up or dispose of infectious substances, except under the supervision of a specialist**

- Do isolate the spill or leak area immediately.
- Do keep unauthorized personnel away.
- Do avoid contact with broken glass or sharp objects that may cause cuts or abrasions that could increase the risk of exposure.
- Do cover damaged package or spilled material with damp towel and wet the towel and package with liquid bleach or other suitable disinfectant to inactivate any released infectious substance.
- Do absorb spilled materials and disinfectant with earth, sand or other non-combustible material while avoiding direct contact.
- Do identify the substance involved if possible, and report the spill to the appropriate authorities.

## **WHAT SHOULD YOU NOT DO IN THE EVENT OF A SPILL OR LEAK?**

- Do not touch or walk through spilled material
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing
- Do not touch any liquid (water or frost) that may be produced by damaged packages containing dry ice. It could be contaminated by the contents of the parcel.

## **WHAT SHOULD YOU DO IF YOU SUSPECT SOMEONE HAS BEEN EXPOSED TO AN INFECTIOUS SUBSTANCE?**

**CAUTION:** Exposed persons may be a source of contamination.

- Move exposed persons to a safe isolated area.
- Call emergency medical services.
- If clothing and/or shoes are contaminated, remove and isolate them.
- In case of contact of the substance to skin, eyes, nose or mouth, immediately flush the exposed area with running water. Continue this until medical attention is given.
- Contact the appropriate public health or veterinary health authorities as soon as possible.

## INDIVIDUAL REFLECTION WORKSHEET

What are **three** points you want to remember from this module?

1.

2.

3.

What additional information do you need on this module?

**NOTES**