

Who we are

The University of Wisconsin Oshkosh Risk and Safety office is dedicated to preserving human, physical and financial assets of UW Oshkosh and supporting the teaching, research, learning and sustainability missions of our campus community. The Risk and Safety office provides resources and guidance in various areas in order to reduce risk to the University and improve campus welfare.

The Risk and Safety office also handles all property claims, contract reviews, liability issues and insurance claims, as well as acting as a liaison between UWO, the UW System and the Department of Administration.

Contact Us

UW Oshkosh Risk & Safety
800 Algoma Blvd
Oshkosh, WI 54901

Phone: (920) 424-1234

Email: risk.safety@uwsoh.edu

Web: <https://uwosh.edu/safety/>

Biohazard Materials Shipping Guide



University of Wisconsin Oshkosh
UW Oshkosh Risk & Safety
800 Algoma Blvd
Oshkosh, WI 54901

**UNIVERSITY OF WISCONSIN
OSHKOSH**

Office of Risk & Safety
Updated: 10/2018

Table of Contents

Regulations & Classifications.....	1-2
General Packaging Instructions.....	3-4
Transport on Campus.....	5-6
Category A - Infectious Substances.....	7-9
Category B -Infectious Substances.....	10-12
Exempt Biological Substance.....	13-14
Genetically Modified Organisms	15-16
Dry Ice (Carbon Dioxide, Solid)	17-19
References	20-21

Resources

University of Wisconsin-Madison Office of Biological Safety

Tara Schnell, UW-Madison Bio HazMat Shipping & Biosafety Trainer
(608) 890-3471; tara.schnell@wisc.edu;
<https://ehs.wisc.edu/hazmat-shipping-transportation/>

USPS Regulations. C023 Hazardous Materials

C023 describes the general standards, restrictions, and prohibitions that apply to hazardous materials that are domestically shipped
<https://pe.usps.com/archive/html/dmmarchive20030810/C023.htm>

FedEx : How to Ship Hazardous Materials

Customer Service Phone: 1.800.463.3339
<https://www.fedex.com/en-us/service-guide/hazardous-materials/how-to-ship.html>

UPS Campus Ship Guide for Administrators and Shippers

https://www.ups.com/assets/resources/media/en_US/UPS-CampusShip-User-Guide.pdf

CDC training resources for Division 6.2

<https://www.cdc.gov/labtraining/training-courses/packing-shipping-division-6.2-materials.html>

PHMSA (DOT) Hazardous Materials Transportation Training Modules:

<https://www.phmsa.dot.gov/training/hazmat/training-modules>

UWSA Hazardous Material Transportation

<https://www.wisconsin.edu/ehs/hazmat/hazmat-transportation/>

Resources

UW Oshkosh Risk & Safety Department

Phone: (920) 424-1234

Email: risk.safety@uwosh.edu

Physical Address: 214 Dempsey Hall (M–F 7:45 a.m.–4:30 p.m.)

Mailing Address: UW Oshkosh Risk and Safety, 800 Algoma Blvd.
Oshkosh, WI 54901

Chemical and Radiation Safety Programs

www.chemsafety.wisc.edu

www.radiationsafety.wisc.edu

ChemTel Shipping Instructions for UW System

(Need NetID to access)

<https://www.wisconsin.edu/ehs/hazmat/hazmat-transportation/chemtel/>

Hazardous Materials Information Center

Phone: 1-800-467-4922

Email: infocntr@dot.gov

FAQ Webpage: <https://www.transportation.gov/check-the-box/FAQs>

Code of Federal Regulations (Title 49: Transportation)

<https://www.gpo.gov/fdsys/pkg/CFR-2012-title49-vol2/pdf/CFR-2012-title49-vol2.pdf>

Guide for Preparing Shipping Papers

<https://hazmatonline.phmsa.dot.gov/services/publication/documents/Guide%20for%20Preparing%20Shipping%20Papers.pdf>

This document is for general guidance only and should not be used to determine compliance with PHH50-0121-1110 49 CFR, Parts 100-185

Regulations and Classifications

Class 6.2 –Infectious Substances

Defined by the IATA as “substances which are known or are reasonably expected to contain pathogens. Pathogens are defined as microorganisms (including bacteria, viruses, rickettsia, parasites, fungi) and other agents such as prions, which can cause disease in humans or animals.”

Category A

Infectious Substance Affecting Humans (UN2814)

Infectious Substance Affecting Animals (UN2900)

Defined by the IATA as “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”.

Category B

Infectious Substance, Category B (UN3373)

Defined by the DOT as “an infectious substance not in a form generally capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals when exposure to it occurs.” (Includes substances transported for diagnostic or investigational purposes)

Regulations and Classifications

Class 9 – Miscellaneous Hazardous Materials

Carbon Dioxide or Dry Ice (UN1845)

Genetically Modified Organisms/ Microorganisms (UN3245)

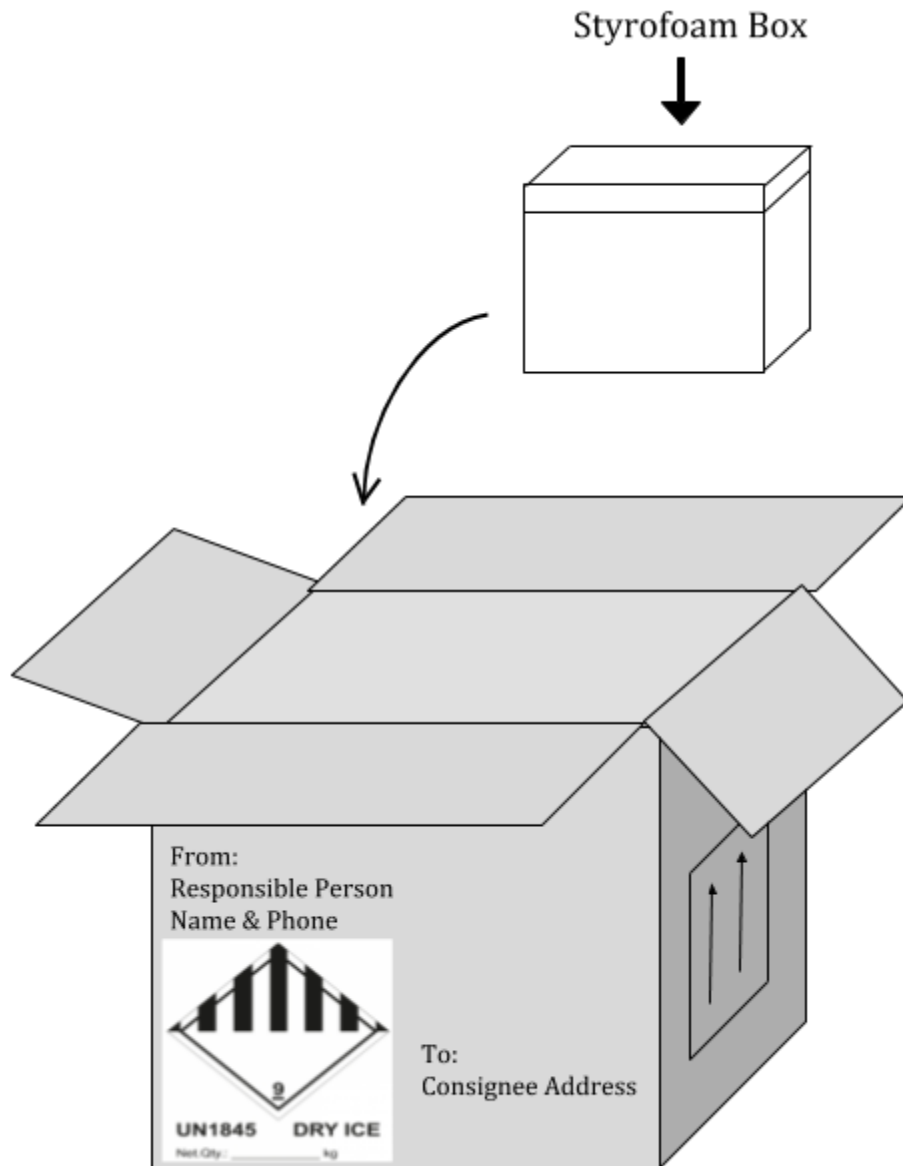
Exempt Human or Animal Specimen

Human or animals specimens are defined as “a human or animal sample transported for routine testing not related to the diagnosis of an infectious disease.” (Ex. Secreta, excreta, blood and its components, tissue and tissue fluids, and body parts)

Dry Ice (Carbon Dioxide, Solid)

Shipping type:	Transport type	Quantity of dry ice	Other material in package	Applicable Regulation	Dry Ice Indication Required on Outer Package				Include Dry Ice Hazard on shipping papers?	Markings needed for other materials in package
					Proper Shipping Name	UN 1845	Class 9 Hazard Label	Net Qty		
Domestic continental USA	Ground-only	Not a factor	No other material or Any other material	Exempt from 49 CFR	None	N	N	N	N	Label as appropriate for other material in package
Domestic USA	Air	200 kg or less	No other material	49 CFR 173.217	Dry Ice or Carbon Dioxide, solid	Y	Y	Y	Y	None
Domestic USA	Air	200 kg or less	Diagnostic, medical or treatment purpose material (non-hazardous)	49 CFR 173.217(d)	Dry Ice for Medical Purposes	N	N	N	N	None
Domestic USA	Air	2.5 Kg or less	Material which is Non-medical and Non-hazardous	49 CFR 173.217(c)	Dry Ice or Carbon Dioxide, solid	N	N	N	N	Describe non-hazardous contents in package
Domestic USA	Air	More than 2.5 kg	Material which is Non-medical and Non-hazardous	49 CFR 173.217	Dry Ice or Carbon Dioxide, solid	Y	Y	Y	Y	Describe non-hazardous contents in package
International	Air	200 kg or less	No other material	IATA	Dry Ice or Carbon Dioxide, solid	Y	Y	Y	Y	None
International	Air	200 kg or less	Any other material	IATA	Dry Ice or Carbon Dioxide, solid	Y	Y	Y	Y	Label as appropriate for other material in package

Dry Ice (Carbon Dioxide, Solid)



General Packaging Instructions

Primary Package

- Must be leak proof (ex. Taped canister, canister with lid)
- If more than one package, provide cushioning between

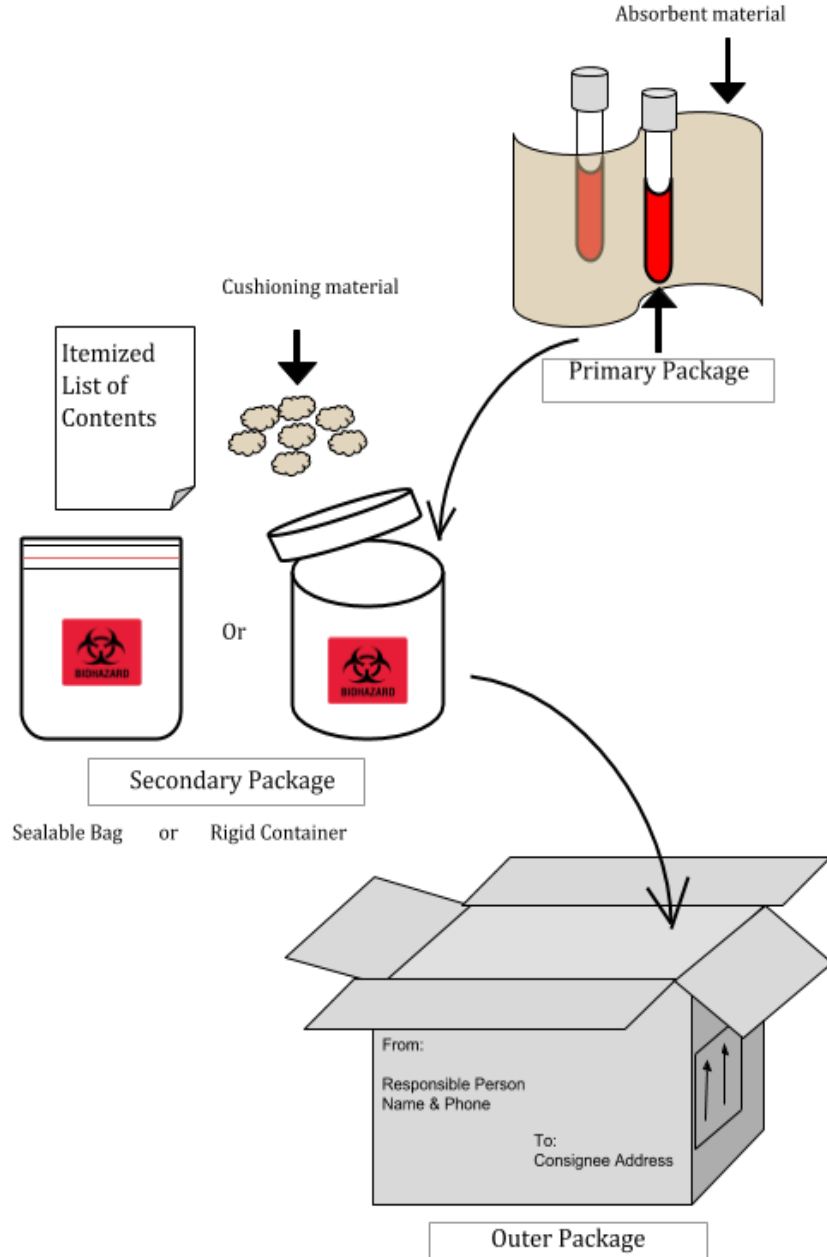
Secondary Package

- Must be secured in rigid outer packaging with suitable cushioning material such that any leakage of the contents will not impair the protective properties of the cushioning material or the outer packaging.
- Absorbent material must be placed between the primary receptacle and secondary packaging (ex. Cellulose wadding, cotton balls, super-absorbent packets, paper towels)
- Must be leak proof (ex. Sealed plastic bag, plastic container, screw-cap can)

Outer Package

- Infectious substance diamond shaped label (If shipping Category A substance)
- Proper shipping name and UN 2814 certification mark
- Shipper and consignee identification (name, address, and telephone)
- Package orientation arrows if primary receptacle exceeds 50 mL or more
- Rigid packaging that must measure not less than 100 mm (3.9 inches) at its smallest overall external dimension

General Packaging Instructions



Dry Ice (Carbon Dioxide, Solid)

Packaging Instructions: DOT: §173.217, IATA/ICAO: 954

Paperwork

- Must be included if shipped with a material that requires a Shipper's Declaration (ex. Category A Infectious Substance or Liquid Nitrogen)
- If shipping within the USA, contact shipping carrier to determine if they require additional packaging and labeling beyond the DOT regulation requirements.

Packaging

Inner Package:

- Dry ice releases carbon dioxide gas over time and can build pressure in package if not properly released. Insure that package is **NOT** airtight and allows the release of pressure.
- Thermal insulated box (ex. Styrofoam) which is **NOT** completely sealed

Outer Package:

- Proper Shipping Name & UN 1845 certification mark
 - "Dry Ice, UN1845" and the net weight of the dry ice in kilograms (1 kg = 2 lbs)
- Shipper and recipient (name, address, and telephone)
- Make sure outer package is **NOT** completely sealed to allow for gas exchange

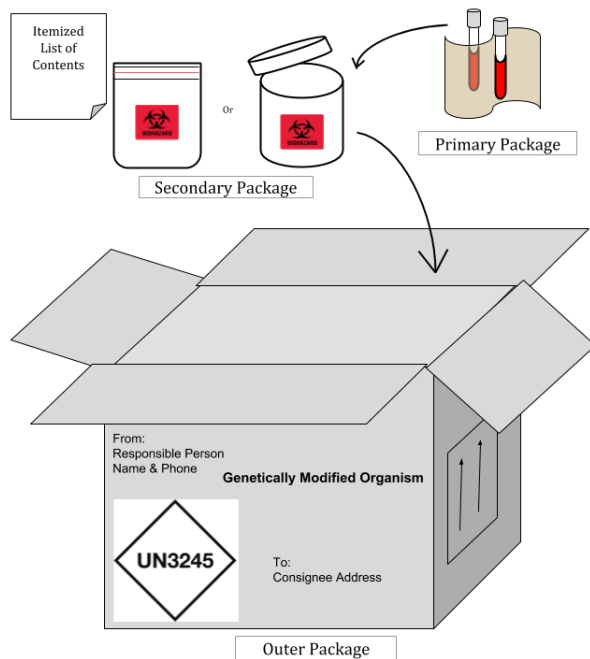
Genetically Modified Organisms

Outer Package:

- Shipper and consignee identification (name, address, and telephone)
- Package orientation arrows if primary receptacle exceeds 50 mL or more
- Rigid packaging that must measure not less than 100 mm (3.9 inches) at its smallest overall external dimension
- Proper Shipping Name & UN 3245 certification mark
 - Genetically Modified Organism
 - Genetically Modified Microorganism

Limits:

- No limit on maximum quantity per package
- No Cargo Only limit



Transport on Campus

The UW system is exempt from US DOT hazardous material transportation regulations (49CFR) when moving materials on campus or in a campus vehicle on public roadways but must follow certain safety precautions

Packaging

Primary Package:

Must be leak proof, sealed and contain padding if there is more than one specimen to prevent potential breakage

Secondary Package:

Must be leak proof and contain enough absorbent material to soak up any potential leaks

Outer Package:

Preferably rigid box or bin with cushioning material to prevent sliding of secondary package. Outer labeling should also include: contact information/ phone number, general description of contents, hazard level and clean up procedure of contents.

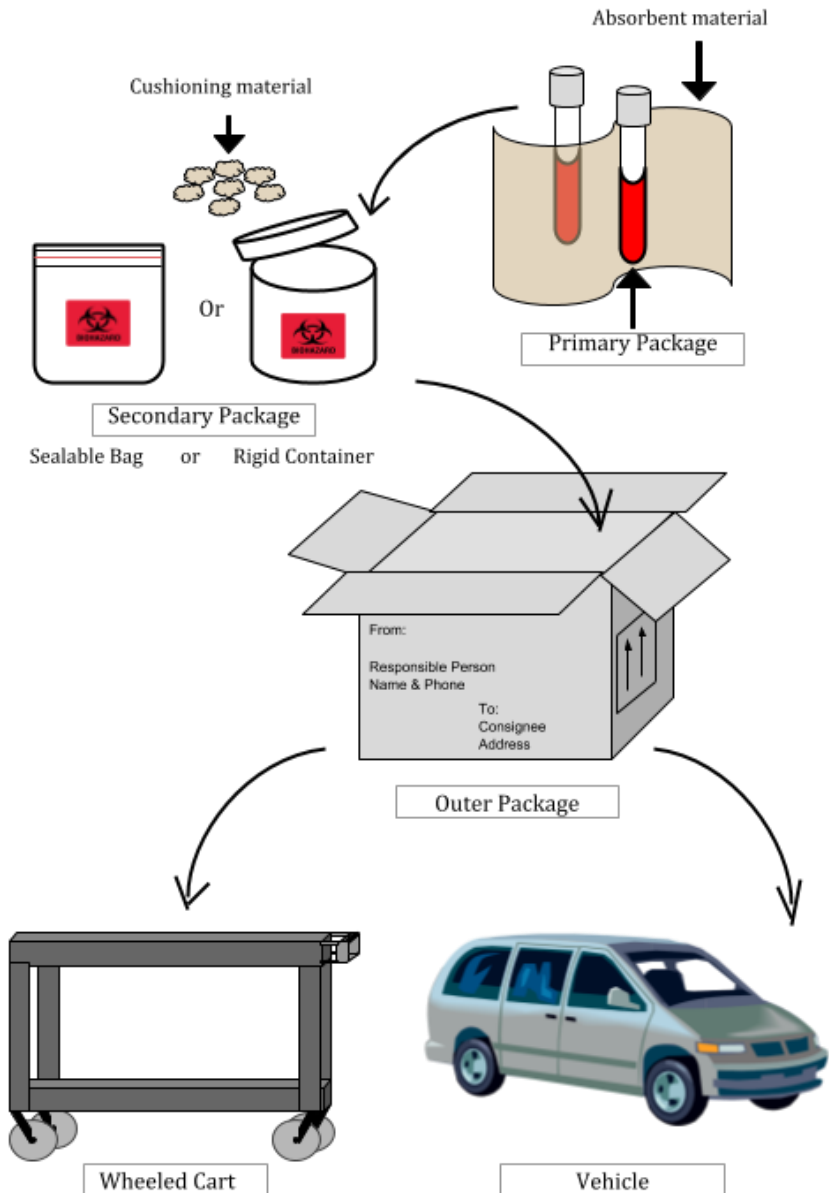
Transportation

Use a wheeled cart to transport packages containing hazardous materials in between buildings, floors and any other area outside the lab.

When transporting in vehicle, secure container of materials to prevent tipping during transport or the container falling out when the doors are opened.

A spill kit containing: gloves, eyewear, lab coat, disinfectant, absorbent material and a waste receptacle should also be transported with the package

Transport on Campus



Genetically Modified Organisms

Genetically Modified Organism (UN3245)

Genetically Modified Microorganism (UN3245)

Genetically modified organisms (GMO) or microorganisms (GMMO) are defined by the IATA as organisms "whose genetic material has been intentionally altered using genetic engineering in a manner that would not naturally occur."

These do not meet the classification of either Category A or Category B Infectious Substances

Packaging Instructions: IATA/ICAO: 959

Paperwork

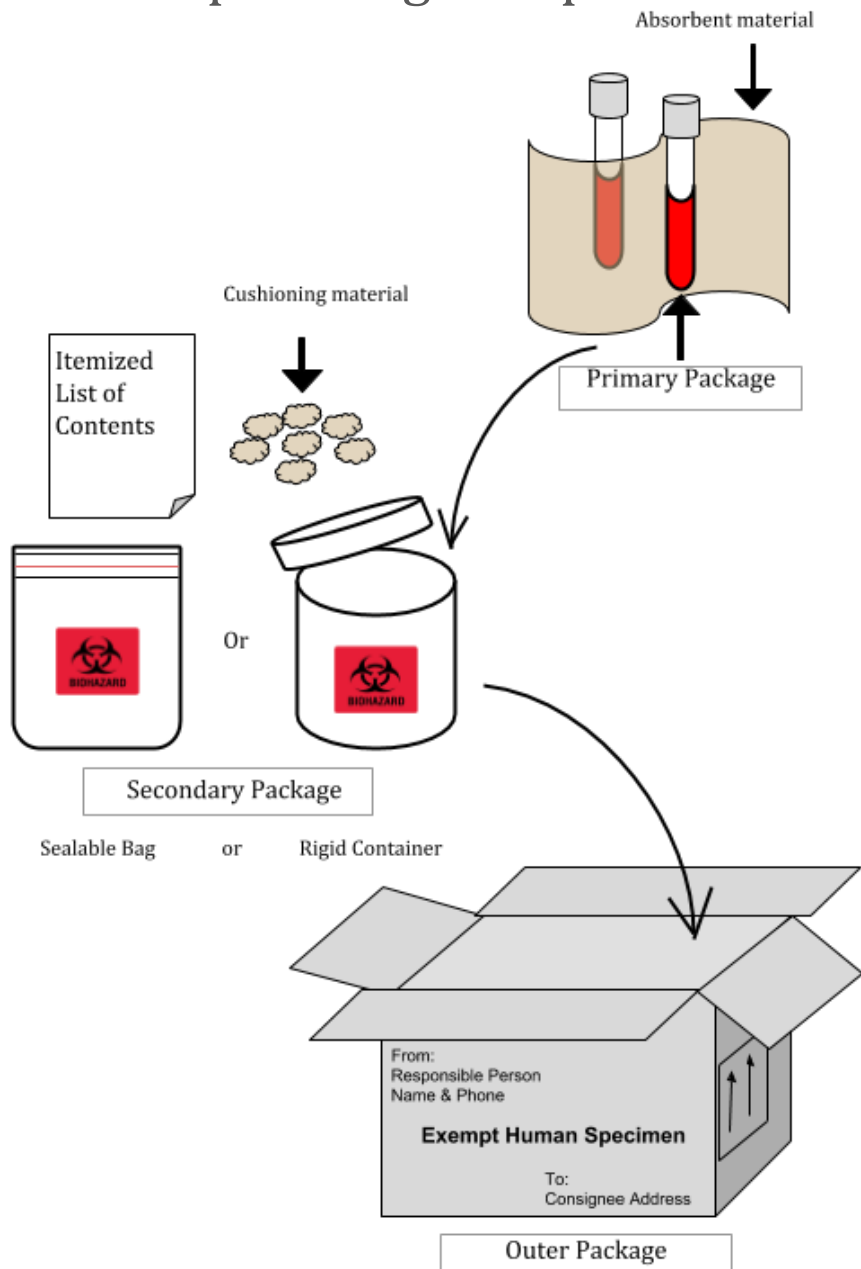
- Shipping papers (aka: waybill, air bill, manifest)
- Only a regulated Dangerous Good when shipped internationally, but not when shipped within the USA

Packaging

Inner Packages:

- Must be leak proof (ex. Taped canister, heat seal, canister with lid)
- Absorbent material must be placed between the primary receptacle and secondary packaging (ex. Cellulose wadding, cotton balls, super-absorbent packets, paper towels)
- Must be packed in secondary packaging in such a way that, under normal conditions of transport, they cannot break, be punctured, or leak their contents into the secondary packaging
- Itemized list of contents

Exempt Biological Specimens



Category A- Infectious Substances

Infectious substance affecting humans (UN2814)

Infectious substance affecting animals (UN2900)

Defined by the IATA as "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 individuals."

Packaging Instructions: DOT: §173.134, §173.196

Paperwork

- All persons packing and shipping infectious materials must be trained and certified every two years in compliance with the Department of Transportation or the International Air Transport Association
- Shipper's Declaration of Dangerous Goods
 - Provide ChemTel contract information as necessary per the ChemTel User Instructions
 - Include the specific agent name in parenthesis next to the proper shipping name
 - Ex: UN2800 Infectious Substance Affecting Humans (*Shigella dysenteriae* culture)
 - For select agents, do not write specific agent name. Instead write: (suspected Category A Infectious Substance)
 - Include dry ice on declaration if in shipment
- Shipping papers (aka: waybill, air bill, manifest)

Category A- Infectious Substances

Packaging

Inner Packages:

- Must be leak proof (ex. Taped canister, heat seal, canister with lid. If screw caps are used, they must be secured by positive means, such as with adhesive tape, paraffin sealing tape, or manufactured locking closure)
- Absorbent material must be placed between the primary receptacle and secondary packaging (ex. Cellulose wadding, cotton balls, super-absorbent packets, paper towels)
- Must be packed in secondary packaging in such a way that, under normal conditions of transport, they cannot break, be punctured, or leak their contents into the secondary packaging
- Itemized list of contents
- Biohazard label
- Safety information sheet (ex. Pathogen Safety Data Sheet) link: <https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment.html>

Outer Package:

- Rigid packaging that must measure not less than 100 mm (3.9 inches) at its smallest overall external dimension
- UN Package Certification Mark
- Shipper or Consignee Identification (Name, Address, Telephone)
- Responsible person name & phone
- Infectious Substance Label
- Proper Shipping Name and UN Number
 - **UN2814** - Infectious Substance Affecting Humans
 - Or
 - **UN2900** - Infectious Substance Affecting Animals
- Directional arrows on two sides of box

Exempt Biological Specimens

Exempt Human Specimen

Exempt Animal Specimen

Defined as "a human or animal sample transported for routine testing not related to the diagnosis of an infectious disease."

Paperwork

- Shipping papers (aka: waybill, air bill, manifest)
- All persons packing and shipping infectious materials must be trained and certified every two years in compliance with the Department of Transportation or the International Air Transport Association

Packaging

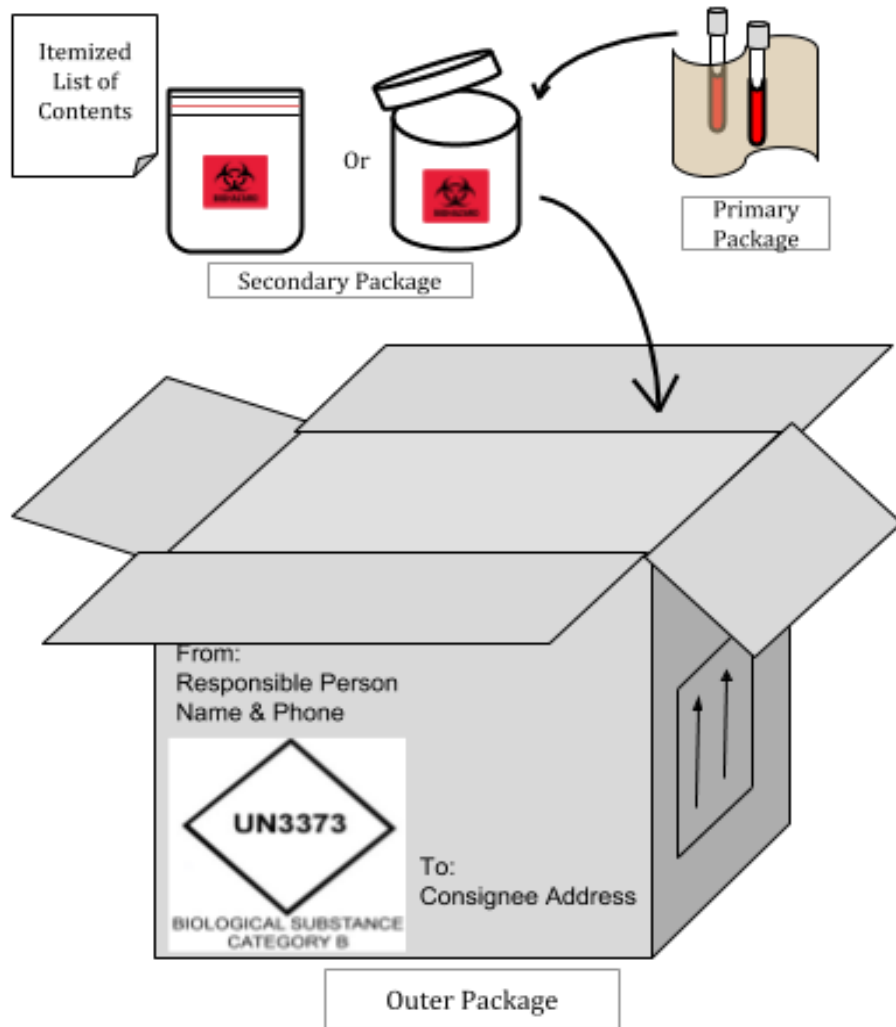
Inner Packages:

- Must be leak proof (ex. Taped canister, heat seal, canister with lid)
- Absorbent material must be placed between the primary receptacle and secondary packaging (ex. Cellulose wadding, cotton balls, super-absorbent packets, paper towels)
- Must be packed in secondary packaging in such a way that, under normal conditions of transport, they cannot break, be punctured, or leak their contents into the secondary packaging
- Itemized list of contents

Outer Package:

- Rigid packaging that must measure not less than 100 mm (3.9 inches) at its smallest overall external dimension
- Responsible person name & phone
- Shipper or Consignee Identification (Name, Address, Telephone)
- Proper Shipping Name
 - Exempt Human Specimen
 - Exempt Animal Specimen

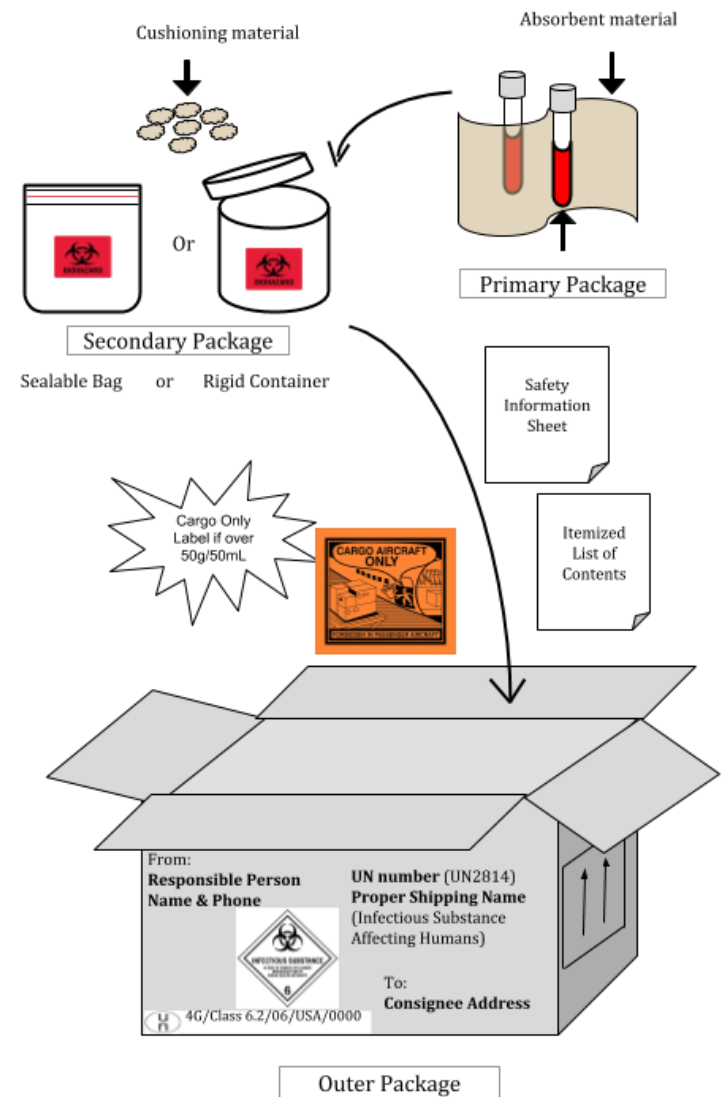
Category B- Infectious Substances



Category A- Infectious Substances

Limits:

- Primary Package(s) Limit: less than 1 L each
- Total Package Limit: Less than 4L/4 kg
- Cargo Only label if primary containers contain over 50g/50ml



Category B- Infectious Substances

Infectious Substances (UN3373)

Defined by the DOT as "an infectious substance not in a form generally capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals when exposure to it occurs." (Includes substances transported for diagnostic or investigational purposes)

Packaging Instructions: DOT: §173.134, §173.199

Paperwork

- All persons packing and shipping infectious materials must be trained and certified every two years in compliance with the Department of Transportation or the International Air Transport Association
- Shipping papers (aka: waybill, air bill, manifest)
- UN Number and Proper Shipping Name
- Include dry ice on paperwork if in shipment

Packaging

Inner Packages:

- Must be leak proof (ex. Taped canister, heat seal, canister with lid)
- Absorbent material must be placed between the primary receptacle and secondary packaging (ex. Cellulose wadding, cotton balls, super-absorbent packets, paper towels)
- Must be packed in secondary packaging in such a way that, under normal conditions of transport, they cannot break, be punctured, or leak their contents into the secondary packaging
- Itemized list of contents
- Biohazard label

Category B- Infectious Substances

Outer Package:

- Must be packed in secondary packaging in such a way that, under normal conditions of transport, they cannot break, be punctured, or leak their contents into the secondary packaging
- Responsible person name & phone
- Shipper or Consignee Identification (Name, Address, Telephone)
- Proper Shipping Name and UN Number
 - Biological Substance, Category B
- UN3373 Diamond label
- Directional arrows on two sides of box

Limits:

- Primary Package(s) Limit: less than 1 L each
- Total Package Limit: Less than 4L/4 kg
- No Cargo Only Limit