



UTTyler™

THE UNIVERSITY OF TEXAS AT TYLER

Dry Ice Shipping – no hazardous materials
Office of Research Compliance

Contact Information

Contact the Office of Research Compliance for information, training, and questions regarding shipping.

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Introduction

The regulations for shipping and receiving dry ice are found in the Hazardous Materials Regulations, 49 CFR.

There are additional regulations depending on how, where and through what company dry ice is shipped.

This training provides general training to dry ice shippers. Consult the shipping company and the packing instructions from eShipGlobal for detailed shipping requirements.

Objectives

By the end of this training you will know how to prepare (identify, package, mark, and label) your dry ice shipment in accordance with the DOT Hazardous Materials Regulations and the IATA Dangerous Goods Regulations.



Training Requirements

You must take the eShipGlobal dry ice training in order to ship dry ice through eShipGlobal. eShipGlobal provides for labels and packing instructions needed for shipment via air and ground.



Dry Ice Hazards

The Department of Transportation (DOT) and the International Air Transport Association (IATA) classify dry ice as a "miscellaneous" hazard, Class 9.

- Dry ice is considered hazardous during transportation for three reasons:
 - Explosion hazard: Dry ice releases a large volume of carbon dioxide gas as it sublimates. If packaged in a container that does not allow for release of gases, it may explode, causing personal injury or property damage.
 - Suffocation hazard: A large volume of carbon dioxide gas emitted in a confined space may create an oxygen deficient atmosphere.
 - Contact hazard: Dry ice is a cryogenic material that causes severe frostbite upon contact with skin.

Identifying Dry Ice

The shipper is the person packaging and labeling a package to be shipped. Once the shipper has decided to use dry ice the shipper must then gather information that will be used to prepare the shipment in compliance with the regulations.

- Net weight of dry ice
- Total weight of package with dry ice
- Shipping company to use (i.e. FedEx)

If you are shipping any other dangerous good/hazardous materials, or are shipping internationally, contact the Office of Research Compliance before starting the process.

Packing Dry Ice

Dry ice requires very specific packing instructions. Basic requirements include

- Venting sublimating gas
- Ensure the inner package containing dry ice is strong enough to withstand transport (Styrofoam is the most common)
- Inner package must snugly fit into outer package (usually cardboard)
- Shipping company requirements



Packing Dry Ice, cont.

Venting dry ice sublimation gas

- Never completely close the inner package because dry ice sublimates. Closed containers will build pressure which can burst during shipping. Dry ice cannot be shipped inside closed conical tubes, for example.
- Using a Styrofoam box is preferred. Only tape two opposite sides of the lid closed, so gas can vent through the remaining opening of the lid.



Packing Dry Ice, cont.

Ensure the inner package containing dry ice is strong enough to withstand transport

- Styrofoam boxes are common in lab setting, because many products are shipped inside Styrofoam boxes.
- These boxes are generally good to hold the dry ice and material being shipped.



Packing Dry Ice, cont.

Inner package must snugly fit into outer package (usually cardboard)

- Vendors ship chemical and biological material in Styrofoam, which is put into a cardboard box with labels.
- Reusing these boxes to ship dry ice ensures a snug fit of the dry ice container in the outer packaging.
- Ensure all labels and instructions are taken off the outer packaging.



Packing Dry Ice, cont.

Shipping company requirements

- Different companies, like FedEx, may have additional requirements when shipping dry ice.
- Shipping through eShipGlobal is company specific and will ensure your package is shipped correctly, no matter the company you use.

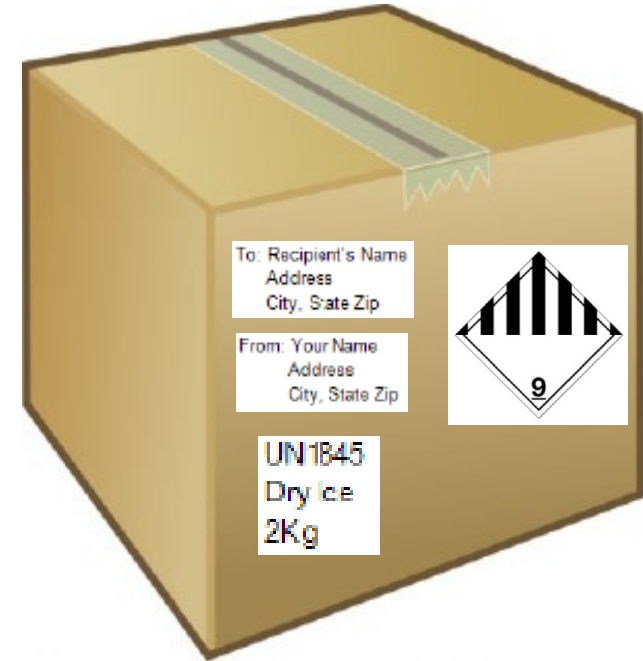


Labels and Markings

The outer packaging must have the appropriate labels

- The recipients address
- The shipper's address
- UN1845, Dry Ice, <net weight of dry ice> must be on the package as well
- Shipping company requirements

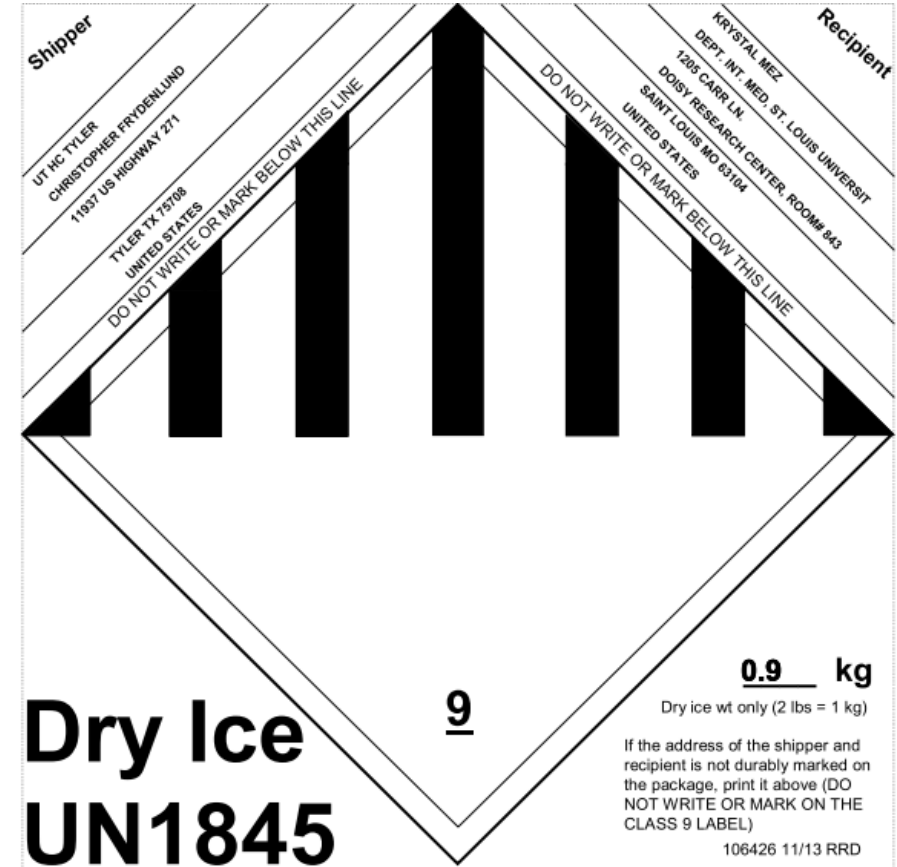
eShipGlobal provides these labels and labeling and marking instructions for you.



Labels and Markings, cont.

The outer packaging must have the appropriate labels

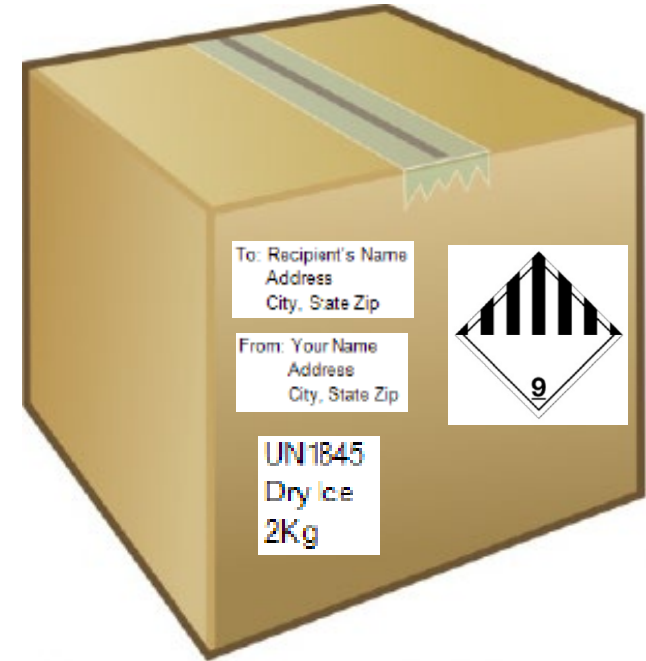
- eShipGlobal combines the labels, as shown to the right.
- This one label replaces the two labels for
 - UN1845, Dry Ice and <net weight of dry ice> label
 - Class 9 label
- This label must be affixed to the outer packaging as previously shown.



Labels and Markings, cont.

The outer packaging must have the appropriate labels

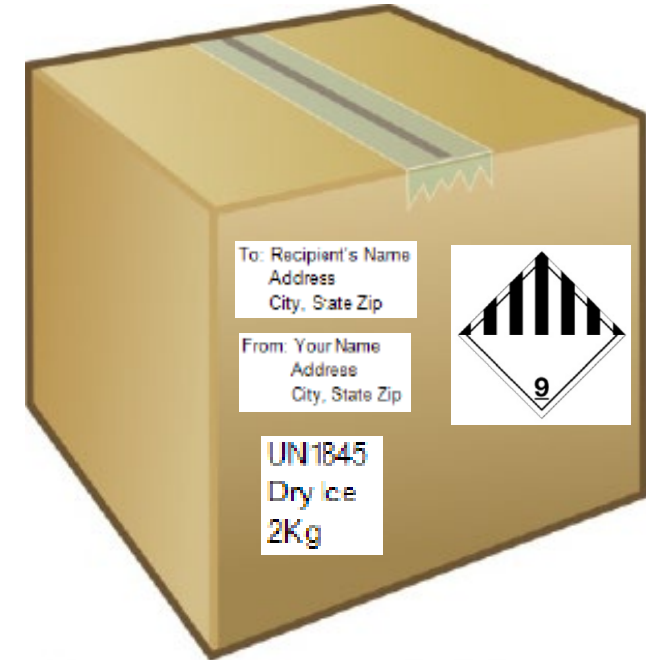
- Additionally, eShipGlobal will provide the airway bill (shipping provider label) which can be affixed to the top of the box (not shown).



Labels and Markings, cont.

Shipping company requirements

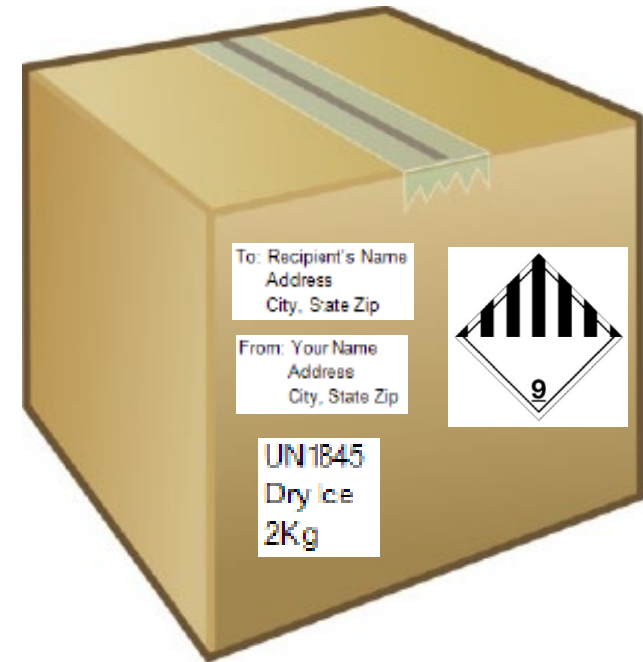
- Different companies, like FedEx, may have additional requirements when shipping dry ice.
- Shipping through eShipGlobal is company specific and will ensure your package is shipped correctly, no matter the company you use.



Questions?

Contact Chris Frydenlund for general questions and information, if you need to ship hazardous chemicals or certain biological organisms, and would like assistance with packaging and shipping approved items.

The next slides give a step by step how-to for shipping noninfectious or hazardous items in eShipGlobal.



eShipGlobal for Dry Ice

eShipGlobal is an easy-to-use web program for shipping dry ice. The program will not allow you to ship unless the required information from the previous slides is entered correctly. eShipGlobal also gives you the shipping label along with all the required labels and instructions. This makes eShipGlobal essential for shipment of dry ice.

Logging into eShipGlobal

Go to the address:

<https://enterprise.eshipglobal.com>

and log into eShipGlobal.

Enterprise @ eShipGlobal

Login

Welcome to eShipGlobal's Shipping System

Fast. Simple.

Logging into eShipGlobal

Enter your username, password, and Client ID if applicable then click Login to access eShipGlobal.

Contact Tammy Coquat (tammy.coquat@uttyler.edu) at the Health Science Center campus, or Lindsey Hill (lhill@uttyler.edu) on the main campus for access information.

Login

Enter your user credentials below

Client Id

(max 6 characters)

User Name

(max 50 characters)

Password

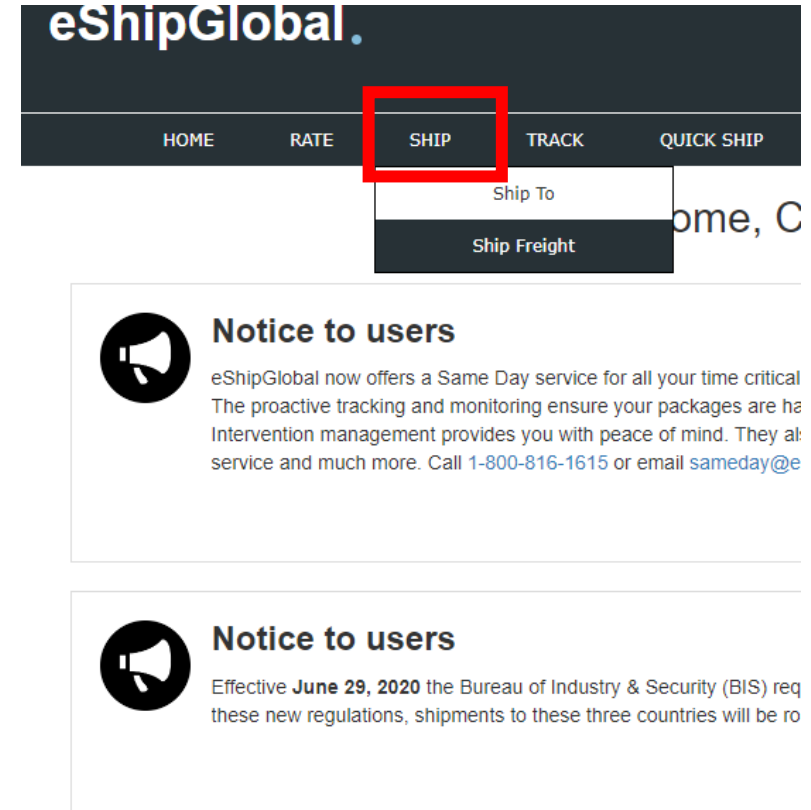
(min 8 characters) [Forgot your password?](#)

[Reset](#) [Login](#)

Any Problems?
Contact our support department - support@eShipGlobal.com

Shipping with eShipGlobal

Hover the mouse over “Ship”
and click “Ship To”



The screenshot shows the eShipGlobal website interface. At the top is a dark header with the logo "eShipGlobal." in white. Below the logo is a navigation bar with five links: "HOME", "RATE", "SHIP", "TRACK", and "QUICK SHIP". The "SHIP" link is highlighted with a red rectangular box. A dropdown menu is visible below the "SHIP" link, containing two options: "Ship To" and "Ship Freight". Below the navigation bar, there are two "Notice to users" sections. Each section features a megaphone icon on the left and text on the right. The first notice mentions a "Same Day service" and provides contact information: "Call 1-800-816-1615 or email sameday@e". The second notice mentions "Effective June 29, 2020" and discusses "Bureau of Industry & Security (BIS) regulations".

eShipGlobal.

HOME RATE **SHIP** TRACK QUICK SHIP

Ship To

Ship Freight

Notice to users

eShipGlobal now offers a Same Day service for all your time critical. The proactive tracking and monitoring ensure your packages are handled. Intervention management provides you with peace of mind. They also offer service and much more. Call 1-800-816-1615 or email sameday@e

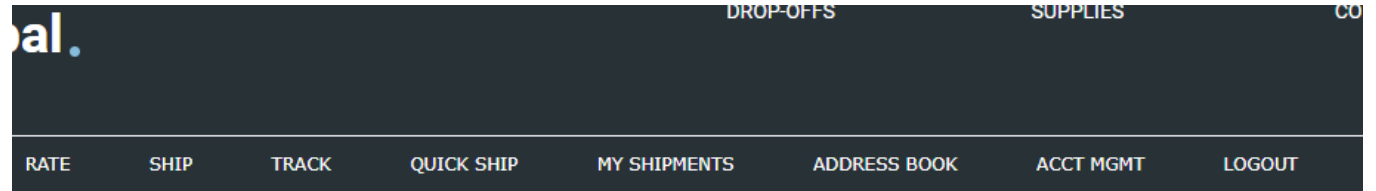
Notice to users

Effective **June 29, 2020** the Bureau of Industry & Security (BIS) requires these new regulations, shipments to these three countries will be required.

Shipping with eShipGlobal

Select Yes if you plan to ship dry ice.

Then select Domestic. Contact the Office of Research Compliance for international shipments.



The screenshot shows the top portion of the eShipGlobal website. The header is dark blue with the logo 'al.' on the left. To the right of the logo are links for 'DROP-OFFS' and 'SUPPLIES'. Below the header is a navigation bar with links: 'RATE', 'SHIP', 'TRACK', 'QUICK SHIP', 'MY SHIPMENTS', 'ADDRESS BOOK', 'ACCT MGMT', and 'LOGOUT'.

SHIPPING SELECTION

Does your shipment contain any of the following:

- Biological Materials
- Chemicals
- Radioactive Materials
- Dry Ice

☒ Yes ☐ No

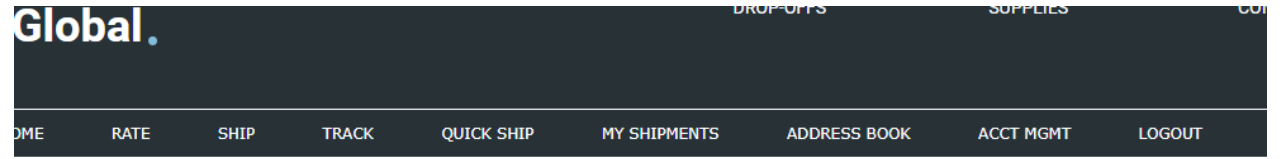
Please select the shipment type below:

☐ Domestic ☐ International

Shipping with eShipGlobal

Select “NON REGULATED MATERIAL WITH DRY ICE” then click “Continue.”

Note: no one is allowed to ship radiological materials. Contact the Office of Research Compliance to ship chemical or biological material.



RESEARCH MATERIAL SHIPPING

Step 1 : Material Classification and Training Verification

Which of the following materials will be part of your shipment?

- ☐ [BIOLOGICAL MATERIALS](#)
- ☐ [CHEMICALS](#)
- ☐ [RADIOACTIVE MATERIALS](#)
- ☐ [NEWLY SYNTHESIZED NON-HAZARDOUS CHEMICALS](#)
- ☒ [NON REGULATED MATERIAL WITH DRY ICE](#)
- ☐ [NON REGULATED MATERIAL WITHOUT DRY ICE](#)
- ☐ [SPECIAL PROVISION A180](#)
- ☐ [SPECIAL PROVISION A152 \(DRY SHIPPERS\)](#)

[Start Over](#) [Continue](#)

Shipping with eShipGlobal

Select the answers that best describe what you are shipping with the dry ice and click “Continue.”

Global.

DROP-OFFS

SUPPLIES

CONTAINER

HOME

RATE

SHIP

TRACK

QUICK SHIP

MY SHIPMENTS

ADDRESS BOOK

ACCT MGMT

LOGOUT

HELP

RESEARCH MATERIAL SHIPPING

Step 1 : Material Classification and Training Verification

NON REGULATED MATERIAL WITH DRY ICE

Does this shipment include materials of human or animal origin such as cell lines, tissues, fluids, etc.; infectious agents; materials containing infectious agents; recombinant materials; or any material of a biological origin?

☐ Yes

☐ No

Start Over

Continue

Shipping with eShipGlobal

Once all questions are answered, click “Continue.”

Note: if the material falls under a category that requires training, eShipGlobal will tell you what training is required and if you meet the requirement. Contact the Office of Research Compliance for information regarding training.

GENETICALLY MODIFIED MICRO-ORGANISMS (GMOs/GMMOs, UN3245)	
Yes	No
<input type="radio"/>	<input checked="" type="radio"/> Is the material a genetically modified microorganism that does not meet the definition of an infectious substance or toxic material (e.g. recombinant E. coli K12 containing the GFP gene or Staphylococcus aureus with a gene deletion)?
Genetically modified microorganisms are microorganisms in which genetic material has been purposely altered through genetic engineering in a way that does not normally occur naturally. Genetically modified microorganisms which do not meet the definition of toxic or infectious substances must be assigned to UN 3245 (GMMO).	
EXEMPT HUMAN OR ANIMAL SPECIMEN	
Yes	No
<input type="radio"/>	<input checked="" type="radio"/> Is the material a human specimen or material for which there is only a minimal likelihood that pathogens are present?
<input type="radio"/>	<input checked="" type="radio"/> Is the material an animal specimen or material for which there is only a minimal likelihood that pathogens are present (e.g. rodent, avian, porcine cells, tissue, organs, blood, or body fluids)?
Are you shipping a non-regulated Biological material on dry ice?	
Yes	No
<input checked="" type="radio"/>	<input type="radio"/>
Training:	Training Required
Training Verification:	You have the appropriate training to continue
<div>Start Over</div> <div>Reset</div> <div>Continue</div>	

Shipping with eShipGlobal

Fill all sections

- 1) Material Name: is exactly what you plan to ship.
- 2) Must put a minimum of \$1 USD in Net Value

Click Continue when complete

MATERIAL DATABASE

Please provide details about the material you are shipping in the form below including:

- Identify the research material that you plan to ship. Then click Continue button to proceed to Shipment details. Required fields are indicated by an asterisk.
- Material Name (Provide description that includes the origin of the material and solution it is packed in, for example protein derived from rat serum, noninfectious in ethanol)
- Quantity in each inner receptacle (For shipments with multiple inner containers)
- Total Quantity in Package (Total weight or volume of package contents)
- Net Value in USD (Total value of package contents)
- NOTE: For Dry Ice shipments, enter quantity of dry ice (in lbs) in the "Special Instructions" section on the next screen.

Material Entry

Material Classification

Non Regulated Material with Dry Ice

*Material Name

Start Typing....

Material / Goods Description:

Biological material not regulated for transport

Maximum Quantity Per Inner Receptacle:

2

ml

(Max. Inner Qty: NA)

*Total Quantity in Package:

6

ml

(Max. Total Qty: NA)

¹Net Value in USD(Min. 1):

1

¹ Enter the total value of items shipped in each classification.

Note:

ⁱPlease note that all grayed fields are pre-populated or optional.

Start Over

Add another material


Continue

Shipping with eShipGlobal

Continue filling in information.

Fill all sections marked with an asterisk (*). However, more information is preferable over the minimum required.

QuickShip
(Optional - If you don't use QuickShip, please skip to the next section)


Select a Profile 

☐ Save/Update the shipment preferences for QuickShip

Profile Name:


[Help](#)

Sender Information
(Select shipper dropdown list)

UT HC Tyler, Christopher Frydenlund 

Edit

Add Sender

Shipping Date: 

Recipient Information
(Please enter recipient Information or choose from saved recipient addresses by clicking on the Load from Address Book button)

Load from Address Book

☐ Add to Address Book


*Company/Contact Name:

Alternate Contact Name:


*Address 1:

Address 2:

*State:

Select State 

Country:

United States 

*Phone:

Email:

*City:

*Zip:

If you would like to validate the address you entered, click here

Validate Address

- Please note that express carriers do not deliver to P.O. Boxes. To avoid delays and/or additional expenses, please provide a physical address.
- Postal codes should contain numbers or letters based on the destination. Please don't use special characters like dashes.
- Please abbreviate your address as needed to fit in the allotted space. Examples of abbreviations are UNIV(university), DEPT (department), ST (street), RD (road), and RM (room).

Package Information
(Select Package type and Service from the dropdown list)

No. of pkgs. for each address above:

☒ Identical ☐ Non-Identical

Shipping with eShipGlobal

Fill all sections marked with an asterisk (*). Be sure to include the weight of the dry ice itself, not the weight of the package with dry ice.

Do not change Additional Instructions. Dry ice ships ambient.

When you are finished click “Show Quote” at the bottom of the screen.

Note: if you have or need a Material Transfer Agreement, contact the Office of Research Compliance before shipping.

Special Instructions

(Additional charges may apply for some special services)

☐ Material Transfer Agreement (MTA) MTA Number :

☐ Saturday Delivery

☐ Signature Required

☐ Signature Release

☐ Dangerous Goods

☒ Dry Ice (Express shipments only)

☐ Overpack

Declared Value: (USD)

[Help](#)

Dangerous Goods Type: [Help](#)

***Dry Ice Weight:** (lbs) [Help](#)

Additional Instructions:

(For World Courier)

Temperature:

Refrigerant:

Ready Date:

Ready Time: : AM

Delivery Date:

Delivery Time: : AM

Pickup Instructions:

Delivery Instructions:

Please fill out the information only if you are intending to ship using world courier.
For World Courier services, please enter the Ready time and Delivery time.

Email Notifications

☐ Notify Shipper on Order ☐ Notify Recipient on Order ☒ Notify Shipper on Delivery ☐ Notify Others on Delivery

☐ Notify Recipients Via SMS (FedEx, UPS only) ☐ Notify Shipper on Pickup ☐ Notify Shipper on Exceptions

[Help](#)

Start Over

Ship

Show Quote

* Additional charges may apply for PICKUP, and you must either contact the carrier directly or schedule a pickup from the My Shipments panel.
Note: Please note that all grayed fields are pre-populated or optional












Shipping with eShipGlobal

Ship Now - Quote

Choose your method of shipping from these options.

If you need to edit your information, click “Edit Shipment” at the bottom of the screen.

Once you are satisfied, click “Ship” at the bottom of the screen.

	Service	*Commitment	¹ Contracted Rate	Sender Information
	eShipGlobal SameDay	STD: End of same business day Click here for details	\$-.-	Christopher Frydenlund UT HC Tyler 11937 US Highway 271 TYLER TX-75708 US
 <input type="radio"/>	UPS 2nd Day Air	STD: End of 2nd business day ACT: Click here for Actual Commitment	\$11.04	Recipient Information Chris Frydenlund The University of Texas at Tyler 3900 University Blvd. CAS 133A Tyler TX-75799 US
 <input type="radio"/>	UPS 2nd Day Air A.M.	STD: 3rd business day by 9 AM ACT: Click here for Actual Commitment	\$11.06	Package Information Ship Date: 10/11/2024 LETTER- 0.5 lbs
 <input type="radio"/>	UPS Next Day Air Saver	STD: Next business day by 3 PM ACT: Click here for Actual Commitment	\$11.08	Special Instructions ² Email - DC DO
 <input type="radio"/>	UPS Next Day Air	STD: Next business day by 10:30 AM ACT: Click here for Actual Commitment	\$11.09	Itemized Charges
 <input type="radio"/>	FedEx 2Day	STD: 2nd business day by 4:30 PM ACT: 2024-10-15 by 17:00:00	\$11.18	
 <input type="radio"/>	FedEx Express Saver	STD: 3rd business day by 4:30 PM ACT: 2024-10-16 by 17:00:00	\$12.28	
 <input type="radio"/>	FedEx Standard Overnight	STD: Next business day by 3:00 PM ACT: 2024-10-14 by 17:00:00	\$12.51	
 <input type="radio"/>	FedEx Priority Overnight	STD: Next business day by 10:30 AM ACT: 2024-10-14 by 10:30:00	\$12.90	
 <input type="radio"/>	UPS Next Day Air Early	STD: Next business day by 8 AM ACT: Click here for Actual Commitment	\$65.42	
 <input type="radio"/>	FedEx First Overnight	STD: Next business day by 8:30 AM ACT: 2024-10-11 by 08:00:00	\$68.92	
<div><input type="button" value="Edit Shipment"/> <input type="button" value="Ship"/></div>				
• Please select one of the options to meet your delivery commitment. Click the 'ship' button only				

Shipping with eShipGlobal

At the bottom of the next page, click “Print Airwaybill” to print the shipping label.

Click “Print all Required Labels” to print the:

- 1) Shipping address label
- 2) Return address label
- 3) Any other labels that the package or envelope requires.

Click “Packing Instructions” to find how to place the labels on your package.

EHS Approval History		EHS Approval Required? N
		EHS Approved N
		EHS Approved Date
		EHS Approver
Overrides		Override? N
		ECO Override Comments:
		EHS Override Comments:
Material Name	Material Classification	
plasmid	Non Regulated Material	
		Proper shipping name:
		UN NO:
		Net Weight/Volume: 0.1 ml
		Net Value: 5 USD
Total for this shipment		\$3.95
<div><div>Cancel Shipment</div><div>Print Airwaybill</div><div>Print all Required Labels</div><div>Packaging Instructions</div><div>Schedule Pickup</div><div>Supporting Documents</div><div>Shipment History</div><div>Packing List</div></div>		

¹ Package Information legend

Required Labels - By printing required labels, you agree that you will attach the shipping documents to your package. If your shipment contains Dry Ice, please ensure to print the dry ice label and ensure to affix on the package.

Please use the Supporting documents option to upload any import permit or any information that pertains to this shipping need.

Email Notifications : S - Email Shipper, R - Email Recipient, DC - Email Shipper on Delivery, PU - Email Shipper on Pickup

SMS Notifications : SR - SMS Recipient

Signature Options: SRQ - Signature Required, SRL - Signature Release

PK - Pickup, DO - Drop-Off : DV - Declared Value : DI - Dry Ice

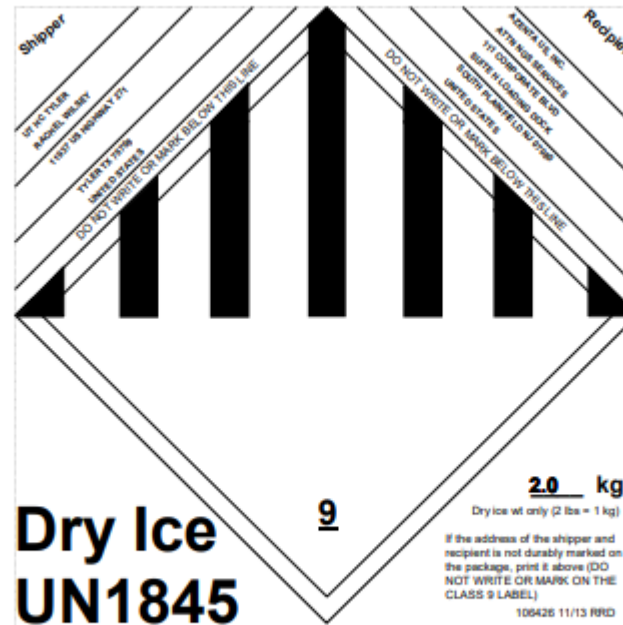
Shipping with eShipGlobal

“Print all Required Labels”

All labels inside the Packing Instructions sheet are required.

Dry Ice shipments **MUST** have the Dry Ice UN1845 label.

This label is provided with all required information. You simply need to place the label on the box. You can use clear packing tape to place the labels on the box.



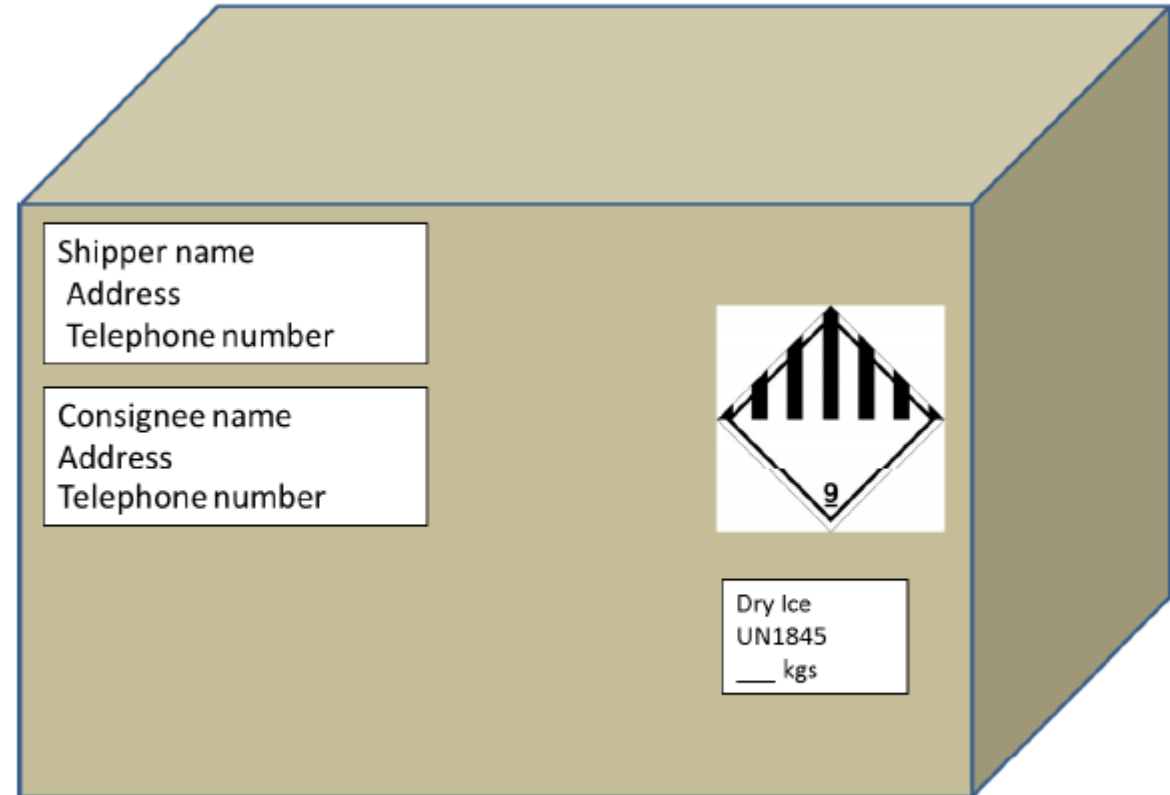
Shipping with eShipGlobal

Packing Instructions

No other labels can be on the box. Remove or cover them.

The packing instructions gives a representation as to how labels **MUST** be placed on your package.

The shipping label (with the bar code) can go anywhere if it does not obstruct any other labels. The shipping label is commonly placed on the top.



Questions?

Contact Chris Frydenlund at cfrydenlund@uttyler.edu for more information.