FedEx®

How to Pack

Whether you're looking for general guidelines for packing day-to-day shipments or specific guidelines for shipping specialty items, you'll find it all here in our series of comprehensive packaging guides. Click the one you want. Print just what you need.

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General Packaging Guidelines

At FedEx, we know proper packaging can help ensure that your shipments arrive safely. So we offer general packaging guidelines — from measuring and weighing your package, to packing methods, sealing and labeling instructions, and guidelines for restricted shipments.

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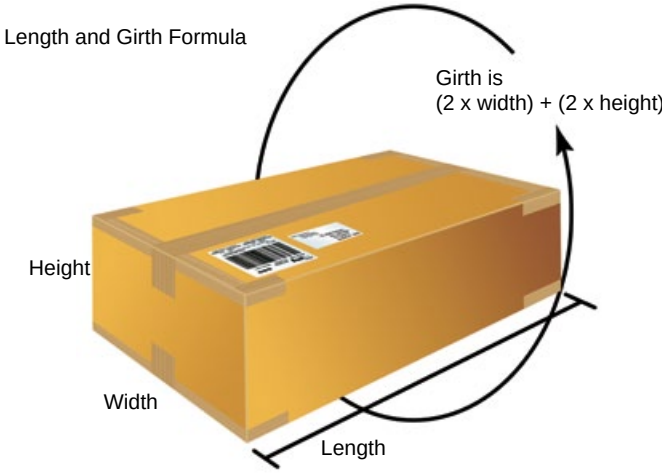
Shipment Size and Weight Restrictions

- 8 J U I F E & Y Q SJFS Services, you can ship packages up to 150 lbs.; up to 119" in length and 165" in length and girth.
- 8 J U I F E & Y Q S O U F S Services, you can ship packages up to 150 lbs.; up to 108" in length and 130" in length and girth.
- 8 J U I F E & Y Q S F J H I U Services, you can ship individual skids of 150 lbs. or more. Skids exceeding 2,200 lbs. in weight or exceeding 70" in height, 119" in length, or 80" in width require prior approval.
- 8 J U I F E & Y P S Services, you can ship packages up to 150 lbs.; up to 108" in length and 165" in length plus girth.
- 8 J U I F E & P Y N % F M J W F S Z Services, you can ship packages up to 70 lbs.; up to 108" in length and 165" in length plus girth.

Place yellow and black safety heavyweight labels over the diagonal corners of your package if it weighs more than 75 lbs. To get the labels, contact your FedEx Express courier or FedEx account executive, or go to a FedEx Office® Print and Ship Center or FedEx World Service Center®.

Measuring Length and Girth



Length is the longest side of the package.or object

The length and girth formula is simple. Here's what you do:

- Measure the length, height, and width of the package.
- - F O M M P X U I F M F O H U I
  and twice the height.

Calculating Dimensional Weight

% J N F O T J P O B M X F J H I U
relatively light compared with its volume. If the dimensional weight exceeds the actual weight, charges based on the dimensional weight will be assessed. To calculate it:

- . V M U J Q M Z U I F J S E J N F O T J P O B M
- % J W J E F C Z (for U.S. and Puerto Rico shipments) or 139 (for international shipments).
- $ P N Q B S F U I F E J N F O T J P O B M

General Packaging Guidelines

- 6 U P S F & Y Q S F T T
  package shipments only; any other use is prohibited.
- : P V S B Z U T F P V S & Y Q S F T T
  and undamaged with all flaps intact.
- $ J Q C P Y
  packed into a corrugated outer box.
- 6 U F P V C M F P V S B D L B H F
- 1 M F B T F E O P U B D L B H F
  express shipments smaller than 7" x 4" x 2", use a FedEx Express packaging option.
- % P V C M F T U P D V T I J P P M F
  around the smaller box.
- 8 S B Q U F J N O T F J W J E P V S B M
  and center them in cartons away from other items and away from the sides, corners, top, and bottom of the box.
- 1 P T J D V P V U D P O U B J O F S
  inner seal and perforated breakaway cap. The inner packaging must be able to contain leaks.
- 1 M B D F U T B U U B D I F E
  handling, such as soiling, marking, or application of adhesive labels, in a protective outer box.
- ' P S F F Y B N Q M F
  should wrap and tape all sharp edges or protrusions.
- & O D M P T F B M M P G Y P V S
  with the shipper's address and phone number and the recipient's address and phone number inside the package before sealing it.
- 3 F N P W F B M M P M E E T U S B Q T
  before shipping, and make sure there are no holes, tears, or corner dents in the outer box.

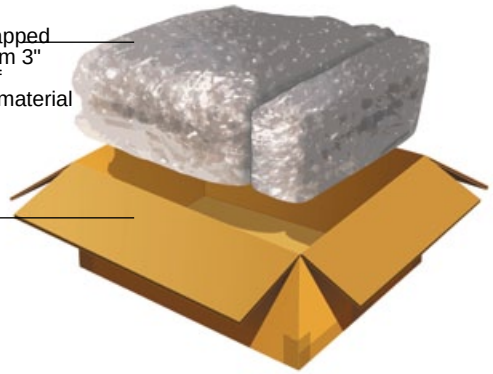
General Packing Methods

Follow these general guidelines for the two most popular packing methods, plus recommendations for odd- or irregular-shaped shipments.

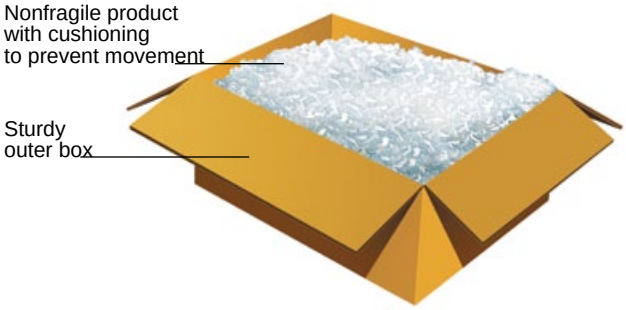
Single-Box Packing Method

- 4 I JCQP O GCS S H PIEMVJDLBFHGRUPJEOTTBJ E F sturdy outer box.
- 6 T G J MVMJDLSV NCQFMXFTEQNBRQFFTQFFGBJCMVMJ T or air-cellular cushioning material such as Bubble Wrap® to fill void spaces and prevent movement of goods inside the box during shipping.
- 1 M BHDPFPUEIBNJHCIBGGFCDEJXBUFSS wet conditions inside a plastic bag.
- $ P O T P TMNJEQBMWPBTQJM-HVSBCQWSFPEESV D U T in a strong sealed container, such as a burlap or siftproof plastic bag, then package in a sturdy outer box.
- 6 TEIFU B QNJFOUHPFSS sealing your package.

Single-Box With Wrapped Item



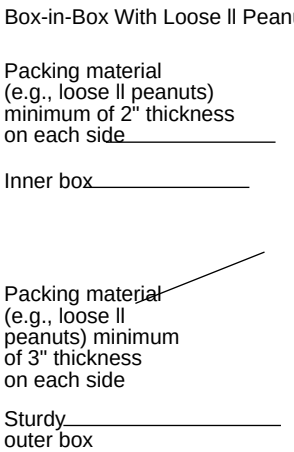
Single-Box Filled With Loose ll Peanuts



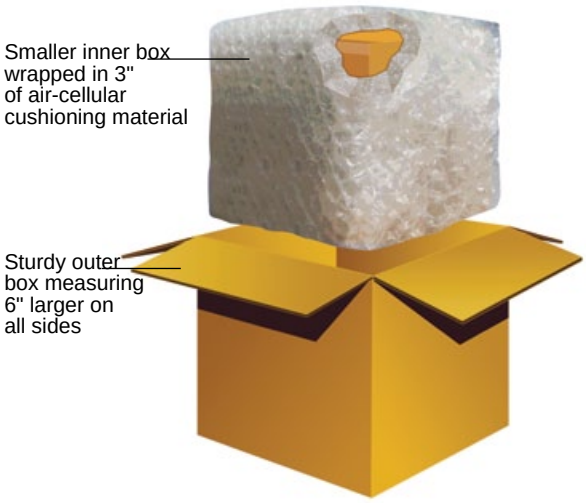
Box-in-Box Packing Method

- 8 S BQQS P EJVDEUJTWXJEBVNBMFMEMZUJ D L O F T T of air-cellular cushioning or foam material to fit snugly inside a corrugated box.
- 3 F T UQSSJPDEUPMVF JNGTOJUJEFPVYT JGOJHM M F S like crumpled newspaper, loosefill peanuts, or other cushioning material.
- $ M FBTOEBQHFO CPVSJUJFU B Q J O H method. This will help prevent accidental opening.
- 6 TEBT F D PEUBEBTEBM F B TMUP OXJUFSBFS E deeper than the inner box.
- $ I P PUTIFS SBPGJNFMULPEEV T IUJFO O F S box inside the larger sturdy outer box.
- 4 I JGQS BQHSJMEVDEUJTWXJSEVQUQIFXDH a minimum 3" thickness of air-cellular cushioning material.
- 8 S BUQJFO CPVSJU IU I JD LPGBFJTST D F M M V M B cushioning material or use at least 3" of loosefill peanuts or other cushioning material to fill the spaces between the inner box and outer box on the top, bottom, and all sides.
- ' J MOWZPTJQEBXDJFNTP SFV T I J NEBUHESJ B M
- 6 TEIFU B QNJFOUHPFSS sealing your package.

Box-in-Box With Loose ll Peanuts



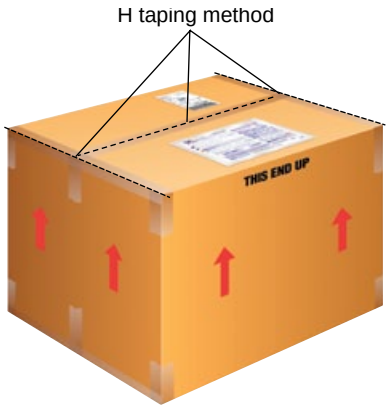
Box-in-Box With Air-Cellular Cushioning



- 1 B D LMBBHGBFOQEB D IJMCJHQPTVCMBEQ Q M J F E facing the same direction on the same side of the package.
- " W PXJSEB QMQEJ GBHSNPTV DEP SPOBFJSS PDU M Z the edge or seam of the package.
- 1 M EBTDJFQ QMJBOPHOMQ B D L BMHBHS HTF T U surface. While we cannot ensure compliance with markings such as “Up” arrows or “This End Up,” properly placing the shipping label increases your chance for the preferred orientation.
- 6 TUF J FUBPHOQ S BDDBTTJBUD D MJVSEBJEOFHT I P X display cases), golf bags, skis, and luggage.

Sealing Your Package

- 6 TQ S F T T V S FQ MBUDBQBDJUBUWS B D U J W B U F E paper tape (minimum 60-lb. grade), or water-activated reinforced tape that is at least 2" wide.
- " Q QUMBZQW FBDDMSP MBQTF B UF P U U F P Q and bottom of the outer box. Use the H taping method.
- % P PVUDF M M P Q BFODPBJQ B T LUJDQHF string, or rope to seal packages.



Packaging Specialty Shipments

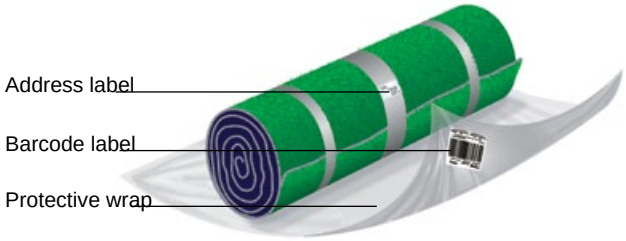
Some shipments require detailed instructions for proper packaging to ensure intact delivery to your destination. 8 FT V H HUF BEVP X O MIPBTF B O E1 MP O F files in their entirety. Guidelines for packaging specialty items contain specific packing, sealing, labeling, and testing instructions. You’ll find specific guidelines for those products in the table of contents. Recommendations for items that don’t require such specific guidelines follow.

Addressing and Labeling Your Package

- 1 M EF FM JWS SZJNBTF F O E U T J E F the package. Include an address for your recipient and yourself.
- % P PMJTU UC PBYE E SGHTS F D J QF E &Y T Express can ship to a P.O. box in certain international locations, including Puerto Rico, but you must provide a valid telephone, fax, or telex number.
- 3 F N PPVS FS PP TBUCPZNBE E SMFBTF P M T the outer box.

General Guidelines for Unique Items

- **Artwork.** Apply masking tape in a criss-cross pattern on the glass surface to prevent glass from splintering; call the FedEx packaging hotline at 1.800.633.7019 for a list of artwork-packaging manufacturers.
- **Photos and Posterboard.** Tape flat items onto a rigid material like plywood, plastic, or layers of fiberboard padding; as an alternative, place printed material between pieces of corrugated pad and tape both pads together at all seams.
- **Undeveloped Film.** Prominently mark packages containing undeveloped film. Special labels are available. Ask your FedEx courier or call 1.800.GoFedEx 1.800.463.3339 (say "order shipping supplies").
- **Stringed Musical Instruments.** Loosen the tension on the strings to remove the stress on the neck of the instrument.
- **Printed Matter.** Bundle printed material together to prevent shifting. Cushion sufficiently before packing into a double-walled corrugated outer box.
- **Rolled Goods.** Tightly wrap rolled goods using several layers of heavy-duty plastic film or kraft paper and wrap with plastic packing tape. Then wrap the address label completely around the object or use a pouch. FedEx cannot assume liability for damage due to inadequate protection.



Banker Box, Storage Box, Archive Box, Document Box, Copy Paper Box

These boxes are designed for palletized transport and storage, not individual transport. However, such boxes can be shipped successfully with proper reinforcement and within certain parameters. FedEx will accept such shipments, but the following criteria are strongly recommended:

- 5 I FU P X B J M R G U T F I J Q N T F P V M F E Y D F F E 30 lbs.
- 6 T P O M F X O E B N C H Y E T S J Q G J E E boxes are more likely to result in loss of or damage to the contents.
- 4 F D V S E F P X Y J U I U P X J Q E M B Q T S U F J T D T V S F sensitive shipping tape around the length, width, and perimeter of the box in two places. Upon completion the tape should resemble a "tic-tac-toe" pattern on all sides of the box.
- * G I C P J Y D P D U P N Q M G P Q B S M P Z E G V B D W P J E areas with packing material, e.g., Bubble Wrap, crumpled kraft paper (not newspaper), or loosefill peanuts.
- ' P S E F O Q U V J S U Q Z P Q T S T M I Z Q M B O E P M U I the lid and the side of the base for two-piece box shipments.

If the above recommendations are not satisfied and the shipment cannot be brought to compliance, place the material in a new corrugated box or use a box-in-a-box of proper size and strength for the weight of product being shipped.

Dangerous Goods Shipments via FedEx Express

% B O H F S P V T according to both current International Air Transport Association (IATA) regulations for air transport and the FedEx Express Terms and Conditions.

* G P V B W P F U F S T U D J B E M C M E & Y B O H F S P V T Goods/Hazardous Materials hotline at 1.800.GoFedEx 1.800.463.3339; press "81" or say "dangerous goods."

To find updated dangerous goods guidelines, information on packaging guidelines, and other information, go to fedex.com/us/services/options, then select

% B O H (F-SHPEVPTVD BBOMSTHPH JBTedEx.com/
us/services/options/dangerousgoods/seminars.html
for IATA and International Civil Aviation Organization (ICAO) training that meets government-mandated training under 49 Code of Federal Regulations (49CFR) 172.700. To speak with a dangerous goods shipping professional, call 1.800.GoFedEx 1.800.463.3339; press "81" or say "dangerous goods."

Hazardous Materials Shipments via FedEx Ground

If you haven't shipped hazardous materials via FedEx Ground before, contact your FedEx account executive first. We need to confirm that you've met government training requirements and can generate the documentation your shipment needs.

To find updated hazardous materials guidelines, information on packaging guidelines, and other information, go to fedex.com/us/services/options, then select Hazardous Materials. To register for online training U I BNUF F%WFTQ B SPUGNSBOUQP%SOUBF SUJFG J D B-tion requirements, go to www.shipsafeshipsmart.com or call 1.800.762.3744, ext. 6753. To speak with a hazardous materials shipping professional, call 1.800.GoFedEx 1.800.463.3339; press "81" or say "dangerous goods."

Bubble Wrap is a registered trademark of Sealed Air Corporation.

NOTICE: This packaging brochure is provided to FedEx customers to help reduce loss or damage due to improper packaging. It is NOT intended to be a comprehensive guide for packaging items we accept for transit. We make no warranties, expressed or implied, regarding this information. Proper packaging is the sole responsibility of the shipper. For more information and additional guidelines, go to the packaging tips page on fedex.com/packaging, email packagingservices@fedex.com, or contact FedEx Packaging Services at 1.800.633.7019. Refer to the current FedEx Service Guide for terms, conditions, and limitations applicable to FedEx® delivery services.
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Packaging Perishable Shipments

To help prevent spoilage and maintain product integrity, follow these instructions for shipping your perishable items via FedEx Express® services.

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Preparing Perishable Items for Shipment

Perishable products may be subjected to harsh environmental conditions, such as excessive temperature or humidity, on the way to their destination. We do not provide temperature-controlled shipping services for express shipments. However, with careful packaging, you can protect your products by providing appropriate temperature protection or stability.

% V STJIOJEQ QJOTMVBEBSEFJGPSJBHSFBUFS preserving products like seafood, plants, meat, and fruits as well as dairy, medical, and chemical products. With the proper combination of insulation and refrigerants, you can maintain products within specific temperature ranges. You can keep products frozen, or prevent products from freezing. You can prevent melting and thawing in hot weather and minimize the effects of short-term temperature variations. We'll show you how.

Insulation

We recommend insulation to reduce the transfer of heat through packaging container walls. The most common insulation materials are expanded polystyrene (EPS) foam, rigid polyurethane foam, and reflective materials (radiant barrier films).

Refrigerants

We recommend refrigerants such as gel coolants and dry ice* to keep perishable products cold or frozen. However, do not use dry ice as a refrigerant for live seafood such as lobsters; use gel coolants instead. Wet ice has many disadvantages, including weight and special water-resistant packaging requirements, but it may be used if properly prepared to prevent leakage.

General Guidelines for Packaging Perishables

- 1 BDLTBHHEQNUFROJUTTIUBBDEBMOJOH different orientations.
- 6 TFBS FGSJHFBXSBQQFSQSPEXDUJUTE required temperature range. Use gel coolants for refrigerating products between 32 F (0 C) and 60 F (16 C). Use dry ice* for frozen items.

% SJDE BSECJPOTJPEGJE JTDPOTJEFSFEIBDBSEPVT hazardous material for air transport and requires special handling. See Dry Ice Shipping Regulations for details.

- 6 TJFOTVGHBBWFEUBXJUBNFSJOJNVN 1-1/2"-thick walls.
- # BQIFSJTQJTQBDEWFBUBNDFMSUIBPXS shipments that contain liquid, using minimum 2-mil watertight plastic bags.
- 1 MBDFDPMEPBNOUSBOTGFSWFSUJDBMMZ
- *ODMVEFBEEFEJOTUSVDUJPOTPOUIF outside of the package to indicate the location of the shipper and the recipient on each shipping label.

Express Service Recommendations

- 8FSFDPNNFOEUIBUDVTUPNFSTVTFUIF First Overnight®, FedEx Priority Overnight®, FedEx Standard Overnight® PSFE&%®BGedEx Freight.
- 5IFBWFSBHFXFJHIUMJNJUGPSNPTUPGUIF most FedEx Express overnight services is 150 lbs., including packaging and refrigerant.
- 'PSBWFSZMBSHFTIJQNFOUTXJUIUPUBM weight of 151 to 2,200 lbs. each, use FedEx %BUBGedEx Freight.
- 8FSFDPNNFOEVTJOHUIFQSJPSJUZPWFSOJHIU minimum transit time of 30 hours.
- 'FE&Y1SFTTUPNFFUTQFDJBMEFMJWFSZOFFET 'FE&%®BGedEx Freight, or FedEx Express Saver®, but if you choose to you should package shipments for at least 12 hours more than the delivery commitment time.
- "WPJEUIFQSPCMFNTUIBUDBOPDDVSXIFO shipments require transit on a weekend or over a holiday period.
- 1SJPSJUZPWFSOJHIUBOE'FE&%®BGedEx Freight services are within the U.S. only.

How to Keep Products Refrigerated During Transit

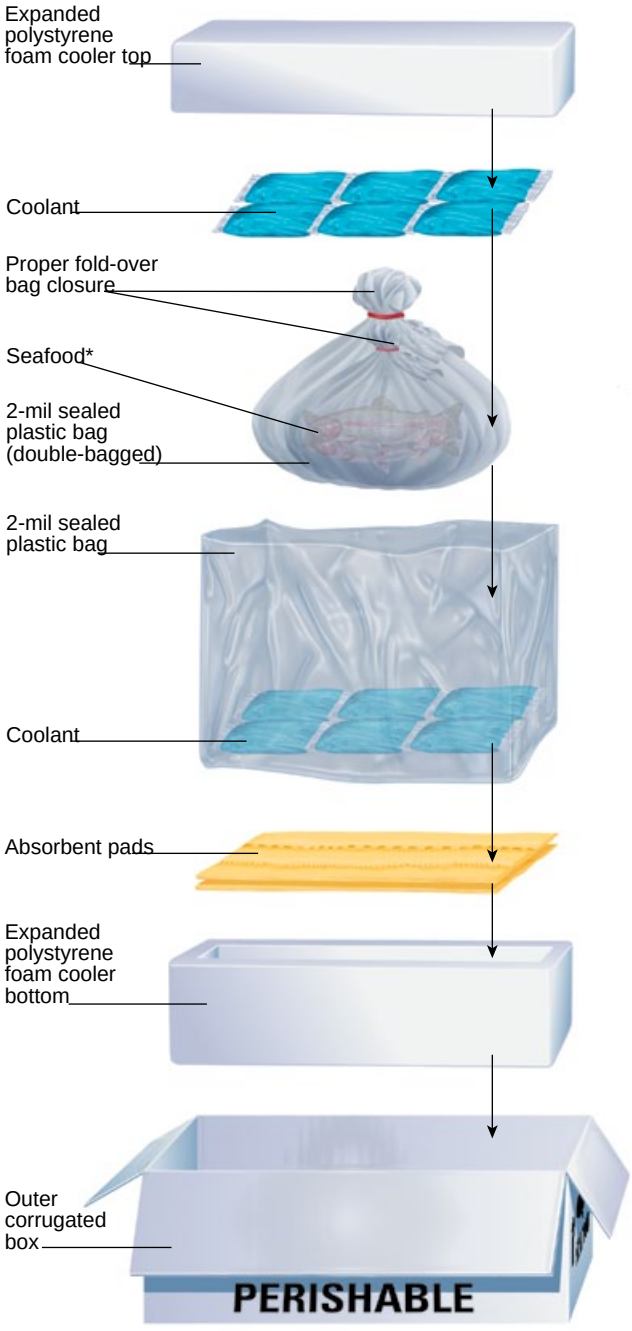
Gel coolants are preferable to wet ice.

- Freeze the coolants according to the manufacturer's guidelines.
- 1 S F DJPFOMT V DMB OUFJBEQ P TJC M F
- * Z P V S Q NDPOUBJOT MJRVJET QUFS J TQ B P MV F D U T that could contain liquids, double-bag the products using minimum 2-mil watertight plastic bags and line the inside of the foam container with a minimum 2-mil plastic liner and absorbent material.
- " S S BOHF TIFFJOH DMPTVSFT allowing space for coolants.
- 1 M BDF GPBN PS OFXTQBQFS around the product.
- ' J M MMVNQT QBDLBHJOH NBUFSJBM peanuts to prevent product movement.
- $ M PTF UIF J OFS BOE TF D V S F M Z
- 1 M BDF UIJT JO O TV DMB OUFJBEQ TUBOEBSE S S V H B U F E outer box.
- $ M PTF BOE TFBM UIF D VTUPNFS P S S V DHPYJUJFE pressure-sensitive plastic tape. Apply the tape over all box flaps and seams.

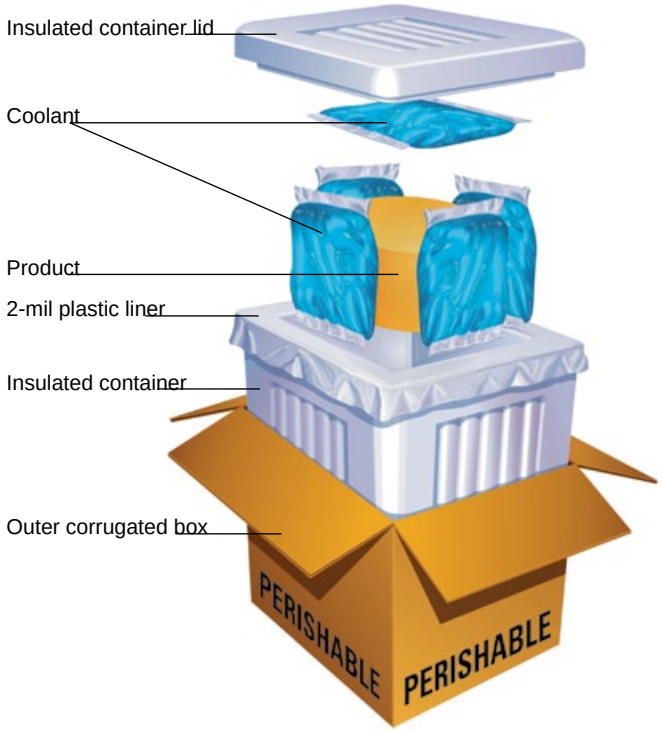
Bag Closure Instructions

Twist end of bag tightly. Fold over. Wrap rubber band securely around fold-over to ensure closure.

Packaging Seafood Shipments With Gel Coolants



Packaging Perishable Shipments With Gel Coolants



* When shipping live edible seafood (lobsters, oysters, crabs), use ge coolants and follow the same packaging steps except do not seal th

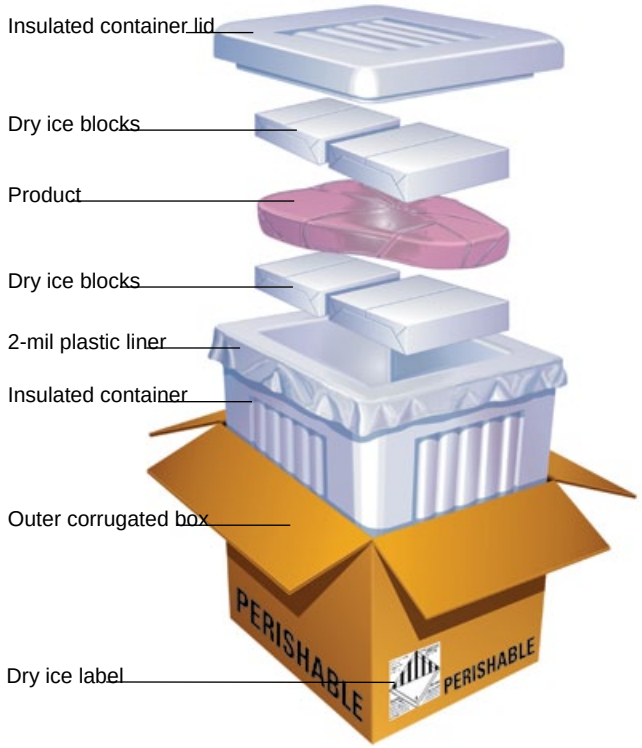
How to Keep Products Frozen During Transit

- ' S F FQ[S P EC VF DG QP TS DF L B H J O H
- 1 S F DJ PJ FO MT V DM FB OU F JB QJ P TF SJ C M F
- * G I TF I J Q ND FP OU UM BJ RO QU FE S J TQ I B P EM VF D U T that can melt or thaw, bag the products or line the insulated container using a minimum 2-mil watertight plastic bag.
- 8 I F G S S B Q S H P E W D T U J E F O T V M B U F E container, allow enough space for dry ice.
- 1 M BB DV F G GB JN D P W F G GB JN D P W F G GB JN D P W

Whether you use online shipment processing at fedex.com P B' F E & J S T C F M K S U P V S documentation and complete the dry ice information. * B E E J U H B I D T I J Q % F S D T B O P B U J P O required" in the Special Handling section on the airbill.

If you have questions or need more information about E S J Z T H J Q N H B U T F E & Y B O H F S P E V T T Hazardous Materials Hotline at 1.800.GoFedEx 1.800.463.3339; press "81" or say "dangerous goods."

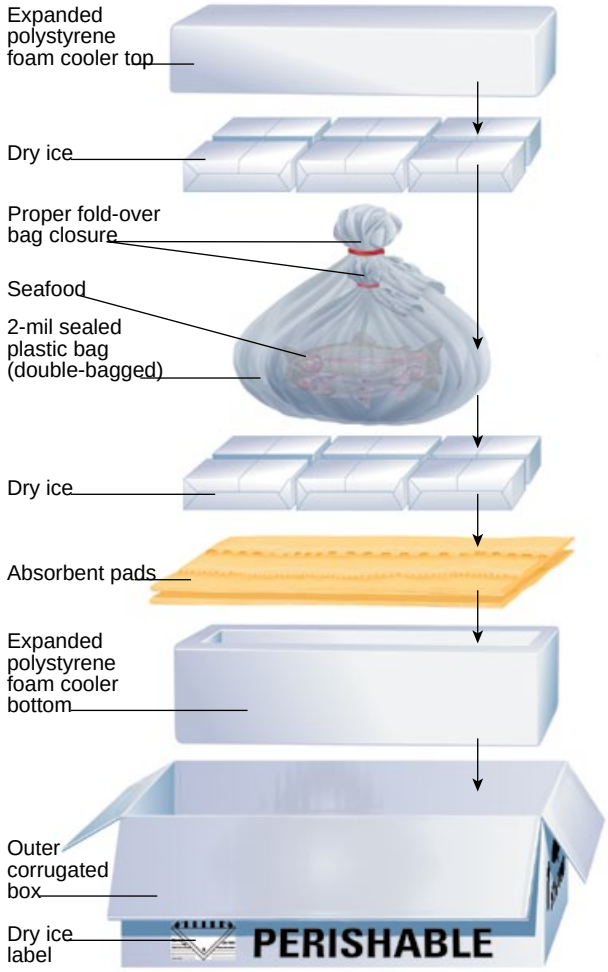
Packaging Perishable Shipments With Dry Ice



Additional Requirements for Shipping Frozen Seafood

- % P V C M F B G B N F J E O J N W Q W B T U J D bags, with each bag individually sealed using the fold-over method.
- 1 M B E F R V C U F S J D F S B U V S F E J O T V M B E T cellulose wadding, or paper towels in the bottom of the foam container to absorb any liquids.

Packaging Frozen Seafood Shipments With Dry Ice

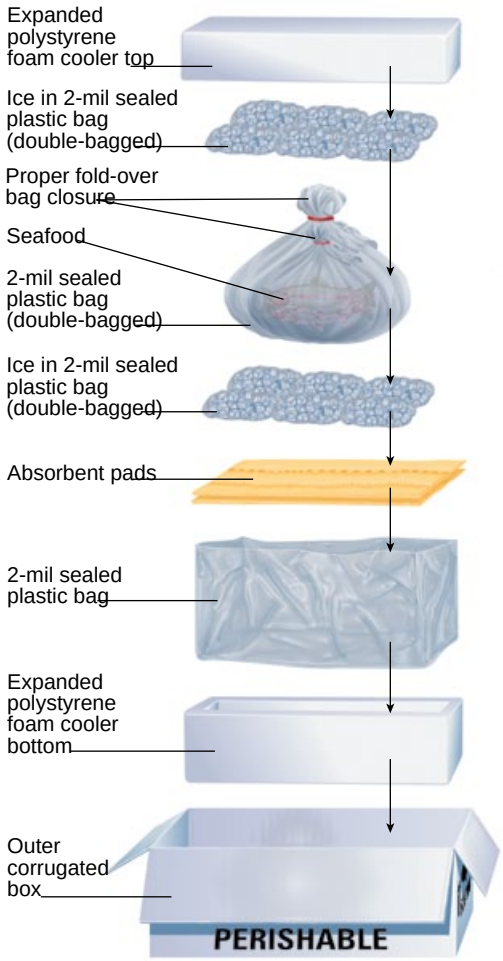


Shipping Seafood With Wet Ice

FedEx does not recommend the use of wet ice (frozen water) as a refrigerant. If you believe wet ice is necessary, it must be prepared to prevent the leakage of any liquid, regardless of orientation.

- % P V C M T F B C B K J E J N Y X Q W M B T U J D bags, with each bag individually sealed using the fold-over method.
- % P V C M U F J C J E H J O J N Y X Q W M B T U J D bags, with each bag individually sealed using the fold-over method.
- - J Q U F J F O T V D M B O U E V E T J B C F H S O J N Y X N M watertight plastic bag.
- 1 M B B E F R V C T U F S I E U T V J B B Q M B E T cellulose wadding, or paper towels in the bottom of the foam container to absorb any liquids.
- ' P M B X M Q F B S D L B H R O V H S G F N S F O U T seafood shipments.
- 4 I J W Q J F B E & S J P S W J F U S Z O F J S H W Q D M Z

Packaging Seafood Shipments With Wet Ice

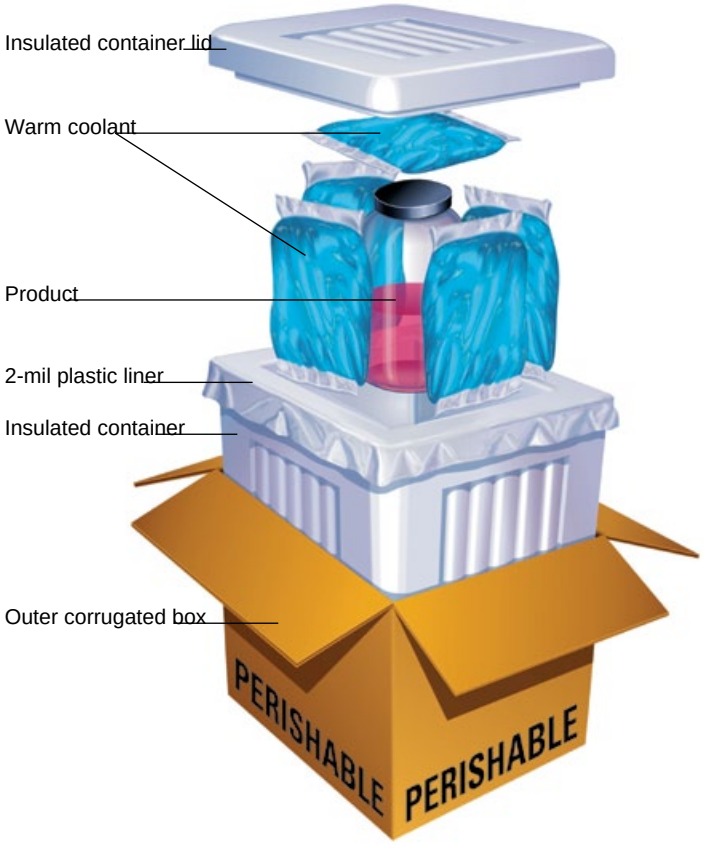


How to Protect Products From Freezing

You can help protect your products from low temperatures or freezing by using "heat sinks," which help maintain desired temperatures. Gel coolants make good heat sinks.

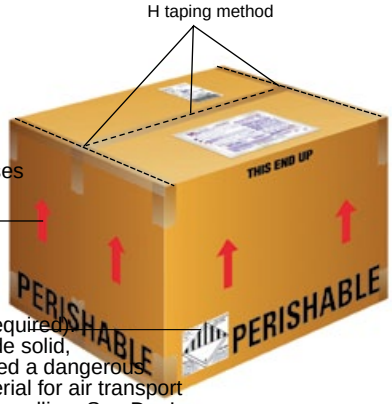
- 1 M E Z D P Q S P E J V O D T B J H E T V D M B O U E B C J E F S surround them with room-temperature (about 72 F) gel coolants to reduce the risk of freezing.
- ' J B M W P T J Q E B X D J E V O C T B V H B M P P T F G J M M peanuts to prevent product movement.
- 4 I J Q J F O T V D M B O U E J B J T B E S S V C H P B Y U F E

Packaging Perishables to Prevent Freezing



Sealing and Labeling Instructions

- " Q QBMWZF B T SJFU FSPJQQSTF T T V S F T F O T J U J W F adhesive plastic tape that is at least 2" wide to both the top and bottom of the carton.
- Tape all seams or flaps using the H taping method.
- 1 M BJDTFI J Q QJ JBCKBMF FPQ I F largest surface.
- . B SZLP V S UDPSU iB F S F S I B C M F w



While we cannot ensure compliance with markings such as up arrows or "This End Up," properly placing the shipping label increases your chance for the preferred orientation.

Dry ice label (when required) Dry ice (carbon dioxide solid, UN 1845) is considered a dangerous good/hazardous material for air transport and requires special handling. See Dry Ice Shipping Regulations for details.

The FedEx Express Transportation Environment

Perishable products must withstand various temperature conditions in the FedEx Express shipping environment.

The cargo areas of our vans and trucks are not temperature-controlled, and temperature will vary depending on time of year, location, exposure to sunlight, and other variables. In summer months the temperature in the cargo area of ground vehicles can be as much as 30 degrees Fahrenheit higher than the ambient temperature outside the vehicle.

On board FedEx Express aircraft, temperatures vary depending on the type of aircraft, the location of each cargo compartment and the package location within each compartment, the length of flight, and the cruising altitude. For general reference, temperatures aboard most wide-body aircraft main cargo compartments vary between 65 F (18 C) and 90 F (32 C). Packages positioned in the bulk department, next to the aircraft's outer structure, might be exposed to temperatures as low as 0 F (-18 C) during flight.

Air pressures on FedEx Express aircraft vary from as low as 8.3 psi at cruise altitude to as much as 14.7 psi on the ground.

FedEx Package Testing and Design Services

We offer free package testing, evaluation, and design services that can help you predict packaging performance and avoid product spoilage. We encourage you to submit a sample of your perishables packaging for testing and evaluation.

Testing Request Guidelines

Follow these steps for submitting your packaging for testing. An active FedEx account number is required. You and your FedEx account executive should expect testing results via email in approximately five to seven business days from FedEx Packaging Services' receipt of your packaging.

1. Obtain a FedEx Packaging Test Application at fedex.com/packaging or by contacting FedEx Packaging Services at packagingservices@fedex.com or 1.800.633.7019.
2. Complete and sign your application, referencing the name of your FedEx account executive on the form. See the FedEx Packaging Test Application for terms governing test or design.
3. Prepare a sample test package including all the packaging components and contents in the exact configuration you intend to send to your customer.
4. Place your completed application, your sample test package labeled "Test This Package," and any necessary cushioning material in a sturdy outer container marked "Overpacked/Test Pkg. Inside."
5. Send your shipment to the address indicated on the FedEx Packaging Test Application.

Contacts and Resources

- How to Pack guidelines at fedex.com/packaging.
- For FedEx Packaging Services, email packagingservices@fedex.com or 1.800.633.7019.
- For FedEx Packaging Solutions, email pkgfield@corp.ds.fedex.com, or contact your FedEx account executive for a referral.
- For FedEx Dangerous Goods Hotline, 1.800.GoFedEx 1.800.463.3339; press “81” or say “dangerous goods.”

NOTICE: This packaging brochure is provided to FedEx customers to help reduce loss or damage due to improper packaging. It is NOT intended to be a comprehensive guide for packaging items we accept for transit. We make no warranties, expressed or implied, regarding this information. Proper packaging is the sole responsibility of the shipper. For more information and additional guidelines, go to the packaging tips page on fedex.com/packaging, email packagingservices@fedex.com, or contact FedEx Packaging Services at 1.800.633.7019. Refer to the current FedEx Service Guide for terms, conditions, and limitations applicable to FedEx® delivery services.
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Packaging Flowers and Plants

To help ensure that your fresh flowers and live plants arrive in top condition, follow these instructions for packaging and shipping via FedEx Express® services.

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Preparing Flowers and Plants for Shipment 18

Express Service Recommendations 19

Sealing and Labeling Instructions 20

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Contacts and Resources 20

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Packaging Requirements

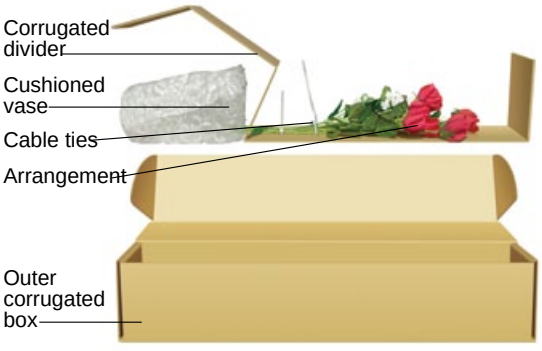
Observe the following general requirements when packaging your shipments:

- Secure contents inside the shipping container, because directional arrows cannot always be honored, and plants and flowers may be shipped in different orientations.
- Protect flowers and plants from temperature extremes that may occur during shipment or after delivery at the recipient's location; for climate protection, see the perishables section of the How to Pack guidelines at fedex.com/packaging.
- To prevent leaks and spills, ship vases or containers without water and cover soil in pots and plant containers.
- Place your shipping label on the top of the box to increase the chance of shipment in the preferred orientation.
- . B L F V S P V S J Q ND F P O N U Q J M B Z C B Z Q Q M J D B C local, state, and federal laws governing shipment of flowers and plants.

Preparing Flowers and Plants for Shipment

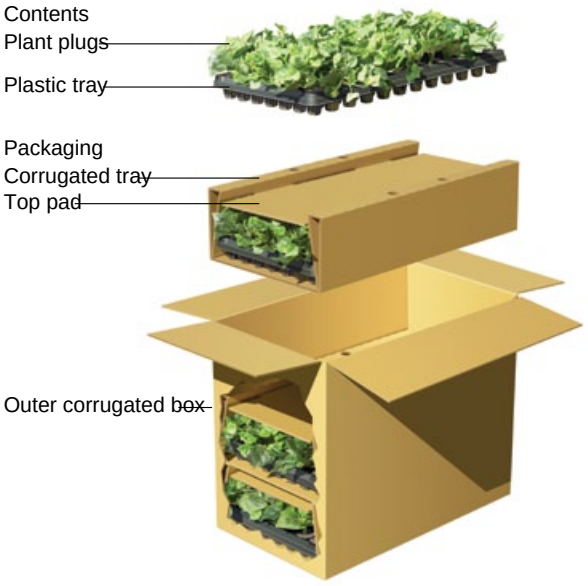
From floral arrangements to bulk flowers, seedlings to mature plants, packaging requirements vary based on the contents of your shipment. The instructions and illustrations are provided here to help you develop effective packaging for your shipments.

Floral Arrangements



Secure floral arrangements inside a box using cable ties or bands secured to the box or to an inside insert to prevent shifting of the arrangement during shipment. If you are shipping a vase with the arrangement, also secure the vase inside the box. We recommend a corrugated divider to separate the vase from the flowers. If the vase is fragile, use additional packaging materials to cushion the vase and protect it from damage during shipment. Ship vases or containers without water; shipping with water is prohibited because it may leak during shipment and cause product damage or safety issues.

Plant Seedlings and Plugs



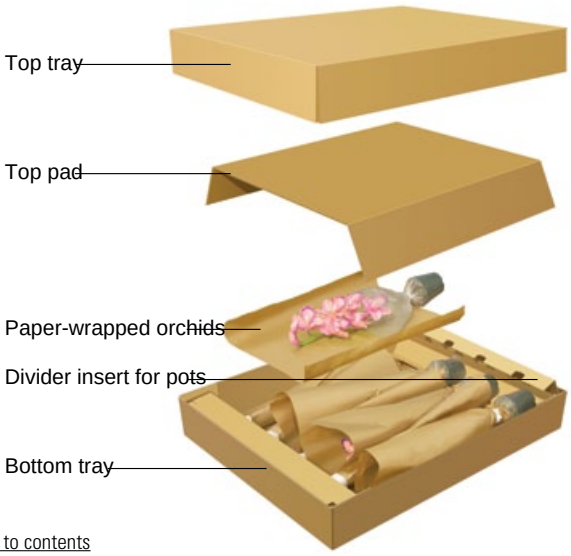
Plant seedlings and plugs are fragile and difficult to secure in the shipping carton, so they require special attention. We recommend a corrugated tray with a top pad designed to push lightly against seedlings or plugs to secure them in their plastic tray during shipment. This packaging method works best with leafy seedlings and plugs, not tall and spindly plant material. You can use plastic mesh over the plant plugs to provide added security. The moisture content of the soil is also an important consideration during shipment. If the soil is too dry, plugs are more likely to spill out of the plastic tray. If the soil is too wet, the corrugated tray may weaken from the moisture. Since you cannot secure plant plugs individually inside the plastic tray, you can expect some plugs to be dislodged during transit and some soil to sift out of the plastic tray, so plan accordingly when preparing your shipment.

Plants

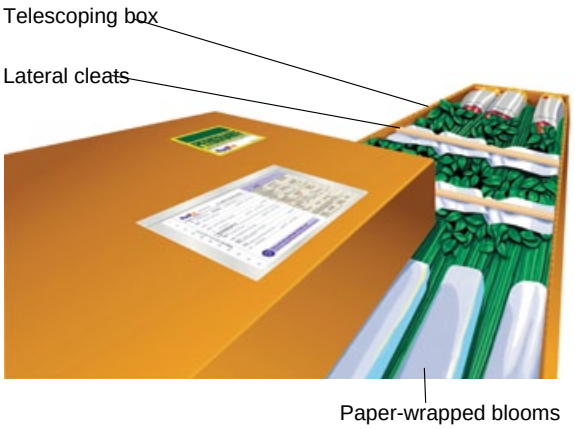
When shipping plants, secure them to prevent movement inside the shipping carton. If the plant shifts inside the carton, it can cause breakage of plant stems and leaves, so we recommend using a corrugated divider that locks the pot inside the box. The soil inside the box must also be contained. Place the pot in a plastic bag and secure the top opening of the bag around the stem of the plant. If the plant does not have a single main stem, you can place paper between the leaves and over the soil and secure it to the pot.

Orchids

Orchids require special packing because they are inherently fragile. When shipping multiple orchids, secure the pots in the shipping carton with enough space to keep plants separated during shipment. Contact between the plants' blooms and leaves can lead to damage. You can also wrap the blooms and leaves in paper to provide extra cushioning when shipping. Cold temperatures can be harmful to tropical flowers like orchids, so when shipping to cold climates make sure your packaging is designed to protect the flowers from temperature variations during shipment.



Bulk Flower Shipments



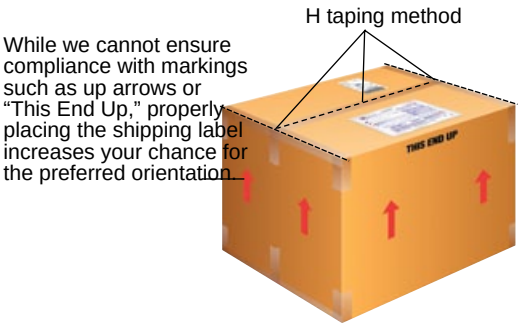
Place bulk flowers in telescoping boxes that accommodate the size of your plant material. Ideally, the boxes should measure less than 38" in length, 24" in height and 26" in width. Use lateral cleats or bands to prevent shifting of the flowers inside the box. Choose corrugated shipping cartons constructed with moisture-resistant adhesive, because when the box is precooled, temperature and humidity can weaken it. We recommend that you use tape to secure the box. Straps can be used, but they tend to loosen during T I J Q N B F O E B Z P N Q S U P I B J M T H F T O W S G F P % P not use string or twine to secure the box.

Express Service Recommendations

- - J L P F U I Q F S S J T X B S F M D F T N U N I B O E P X O F S T plants be shipped via FedEx First Overnight®, FedEx Priority Overnight®, FedEx Standard Overnight®, P S F E &% B F Z eight.
- 5 I F N B Y J N V N D F Q H U S B X F M I Q F Q S B D L B H F for most FedEx Express overnight services is 150 lbs., including packaging and refrigerant.
- For overnight shipment of packages with a gross weight P G U P M G F B D V I T ' F E &% B Z F J H I U
- 8 F S F D P N U N E Z O E V B D L G M H F X O Q G M B O U T for a minimum transit time of 30 hours.
- ' F E & Y P T P S U F D P N T N E Q J S H T M B J C M F T G M P X O Q G M B W O J B E &% B Z F E &% B Z Freight, or FedEx Express Saver®, but if you choose to, you should package shipments for at least 12 hours more than the delivery commitment time.
- " W P T J E Q N P Q F U S J T J U B F N B Z T X U M M require transit on a weekend or over a holiday period.

Sealing and Labeling Instructions

- " Q QBMWZF B T SJFU S PJQQ T F T T V S F T F O T J U J W F adhesive plastic tape that is at least 2" wide to both the top and bottom of the carton.
- 5 B Q F M M B N S G M V B T Q J C J H U B Q U F O H P E
- Place the shipping label on the top of the largest surface.



FedEx Package Testing and Design Services

We offer package testing, evaluation, and design services that can help you predict packaging performance. Packaging must be tested for acceptance by FedEx Packaging Services prior to shipping. Submit a sample of your flower or plant packaging for testing and evaluation.

Testing Request Guidelines

Follow these steps for submitting your packaging for testing. An active FedEx account number is required. You and your FedEx account executive should expect testing results via email in approximately five to seven business days from FedEx Packaging Services' receipt of your packaging.

1. Obtain a FedEx Packaging Test Application at fedex.com/packaging or by contacting FedEx Packaging Services at packagingservices@fedex.com or 1.800.633.7019.
2. Complete and sign your application, referencing the name of your FedEx account executive on the form.
3. Prepare a sample test package including all the packaging components and contents in the exact configuration you intend to send to your customer.
4. Place your completed application, your sample test package labeled "Test This Package," and any necessary cushioning material in a sturdy outer container marked "Overpacked/Test Pkg. Inside."
5. Send your shipment to the address indicated on the FedEx Packaging Test Application.

Contacts and Resources

- 4 F E I Q F S J T T B F O M E H P w to Pack guidelines at fedex.com/packaging.
- ' F E & X D L 4 F S W J D F T packagingservices@fedex.com or 1.800.633.7019.
- ' F E & Y Q M E L F E J H O E F F S T pkgfield@corp.ds.fedex.com, or contact your FedEx account executive for a referral.

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Packaging Computer Shipments

To help protect your computers and peripherals from shock and vibration during transit, follow these instructions for shipping via FedEx® services.

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Recommended Packaging Options

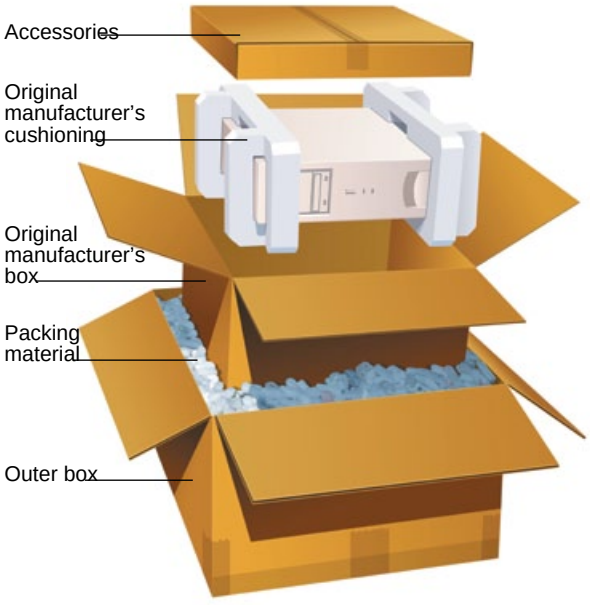
This brochure will help you pack and prepare your computer and peripheral shipments. Follow the instructions for the packaging method of your choice.

- 4 I J Q QX J O P S J H N J B O O B V M G B Q D B J D V L S B F H S J T O H
- 4 I J Q QX J O H P S V J H N J B O O B V M G B Q D B J D V L S B F H S J T O H
- 4 I J Q J Q B ' E E & B Y Q W P Y Q
- 4 I J Q J Q B U O S H B D O B T T J F U
- 1 B D L B S S F T O H J Q U N F O U T

Shipping With Original Manufacturer's Packaging

Original packaging is usually designed to ship the product once, not multiple times. Reuse can weaken the packaging and place the inside product at risk. Overboxing provides extra integrity for the weakened original manufacturer's packaging.

Using Original Packaging and an Outer Box



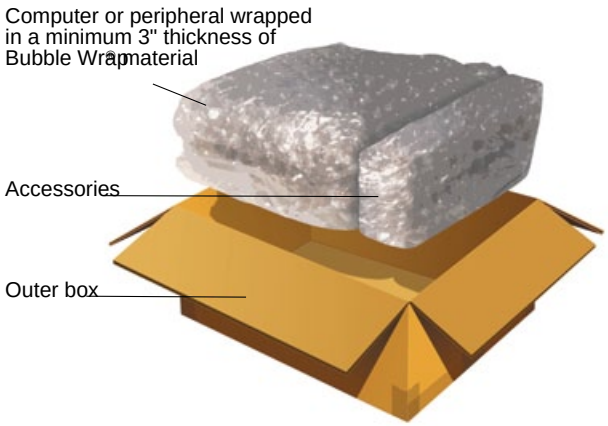
Inspect the original packaging to ensure that the cushioning material and box are intact and unbroken. Make any repairs with pressure-sensitive adhesive plastic tape that is at least 2" wide. Pack the product using all the original packaging components.

Obtain a box that is at least 6" larger in length, width, and height than the original manufacturer's packaging. Fill the bottom of the box with 3" of packing material (e.g., air-cellular cushioning material such as Bubble Wrap® P S M P P T Q F F G B J D W W M O P V U T D F S V T Q I B F G E F S Center the original manufacturer's packaging inside the outer box and fill empty spaces on all sides and the top with packing material. The inner box should be surrounded with at least 3" of packing material around all six sides of the inner box.

Apply at least three strips of pressure-sensitive adhesive plastic tape that is at least 2" wide to both the top and bottom of the carton to protect the package and its contents. Tape all seams or flaps.

Shipping Without Original Manufacturer's Packaging

We recommend three methods for shipping your computers and peripherals if you don't have, or prefer not to use, the original manufacturer's packaging.

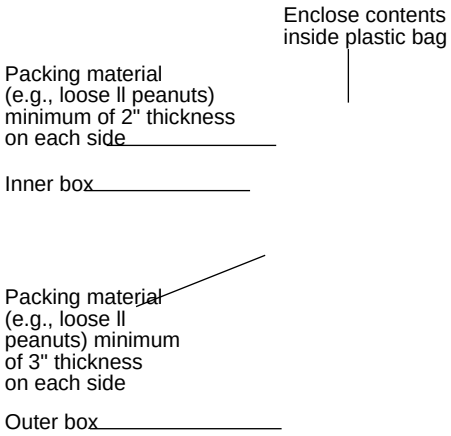


Using Air-Cellular Cushioning Material

Wrap the computer or peripheral on all sides with at least 3" to 4" of air-cellular cushioning material. Place the wrapped item inside a sturdy outer box. Accessories that are wrapped in appropriate amounts of cushioning can also be placed in any open spaces of the box. Fill all spaces with additional cushioning so that the wrapped item fits tightly inside the box. If no open spaces exist, pack accessories in an additional box.

Close and seal both the top and bottom of the box with three strips of pressure-sensitive plastic tape that is at least 2" wide. Tape all seams or flaps.

Using Loosefill Peanuts



Since this type of packing material allows the packaged item to settle to the bottom of the box, it is important to use the overbox method of packaging. The inner box should be at least 4" greater in length, width, and height than the item you are shipping. This will allow for 2" of space for all six sides. The outer box should be at least 6" greater in length, width, and height than the inner box. This will allow 3" of space between the inner box and the outer box.

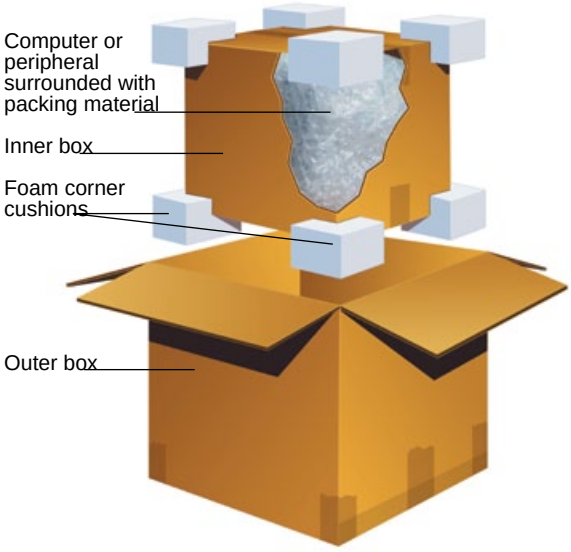
Wrap the computer or peripheral in a plastic bag to prevent the loosefill peanuts from getting inside the unit. Fill the bottom of the inner box with at least 2" of loosefill peanuts and center the wrapped item inside the box. Fill empty spaces on all sides and top with loosefill peanuts, ensuring that there is at least 2" of loosefill peanuts on all six sides of the item. Pack accessories such as power cords, keyboards, and external drives separately, away from the computer or peripheral.

Close and seal both the top and bottom of the box with three strips of pressure-sensitive plastic tape that is at least 2" wide.

Fill the bottom of the outer box with at least 3" of loosefill peanuts and center the inner box inside the outer box. Fill empty spaces on all sides and top of the inner box with loosefill peanuts, ensuring that there is at least 3" of loosefill peanuts on all six sides.

Close and seal both the top and bottom of the box with three strips of pressure-sensitive plastic tape that is at least 2" wide. Tape all seams or flaps.

Using Foam Corner Cushioning



You may choose to use foam corner cushioning specifically designed to properly cushion your product during shipping. This packing method allows you to use one size of inner box, one size of outer box, and one type of foam corner cushioning to ship items of various sizes and weights.

Place the computer or peripheral inside the box and surround the item with at least 1-1/2" of packing material (e.g., loosefill peanuts, air-cellular cushioning, foam-in-place) on all sides so that the item does not move inside the box.

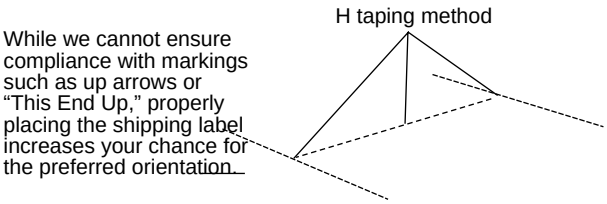
Close and seal the top and bottom of the inner box with three strips of pressure-sensitive plastic tape that is at least 2" wide.

Place the box containing the item inside a larger (outer) box fitted with the foam corner cushions. The outer box must fit tightly around the foam corner cushions.

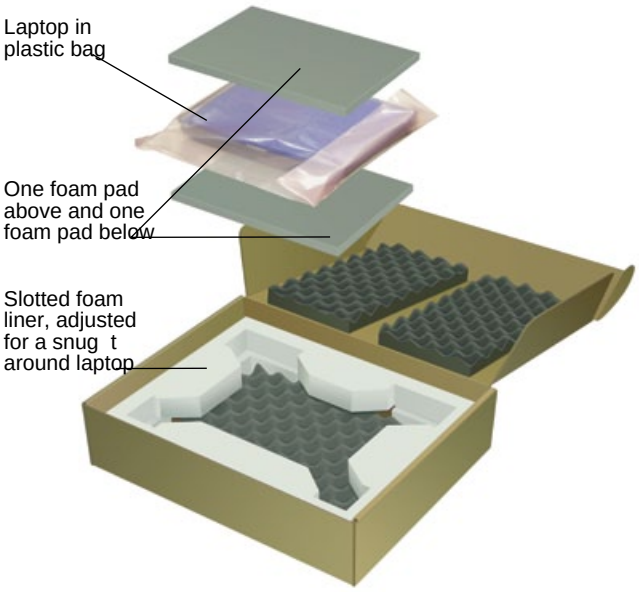
Close and seal the top and bottom of the outer box with three strips of pressure-sensitive plastic tape that is at least 2" wide. Tape all seams or flaps.

Sealing and Labeling Instructions

- Using the H taping method, apply at least three strips of pressure-sensitive adhesive plastic tape that is at least 2" wide to both the top and bottom of the carton.
- 5 B Q B M M B N S M B Q T
- 1 M B J D F I J Q Q J B G K M F P Q G I M B S T H J F E T F U



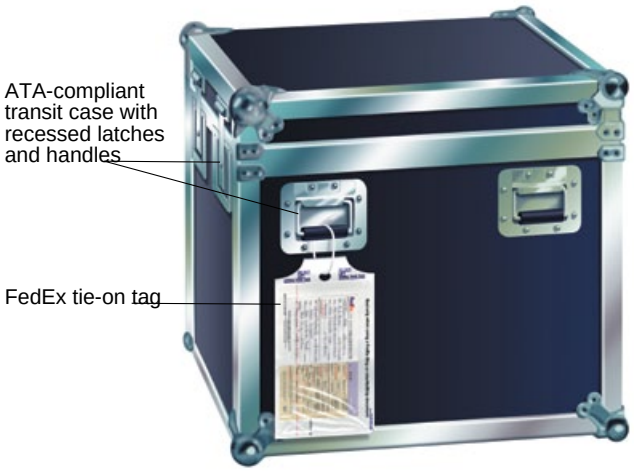
Shipping in a FedEx Laptop Box



When shipping a laptop computer, we recommend that you use our specially designed FedEx Laptop Box whenever possible. The box includes cushioning material and is available for purchase at FedEx Office and FedEx World Service Center® locations.

Place the laptop in the plastic bag, then place one foam pad above and one foam pad below the wrapped laptop. Adjust the slotted foam liner by tearing off just enough material to ensure a snug fit around the laptop. Close the box by inserting the flaps into the side walls. Seal the bottom edge of the laptop box with a strip of pressure-sensitive plastic tape that is at least 2" wide.

Shipping in a Transit Case

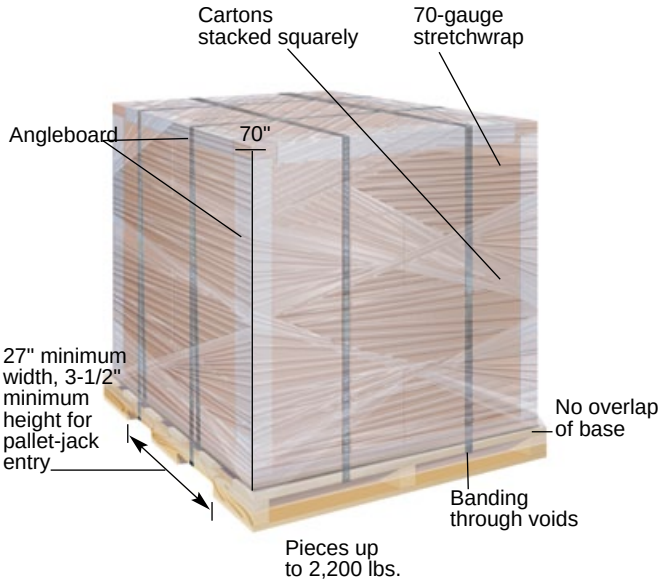


While transit cases can effectively protect computers and peripherals that will be shipped multiple times, care must be taken in the design of both the outer case and the inner cushioning.

When selecting a transit case, make sure the inner foam cushioning is designed to the proper fragility level to protect the computer or peripheral during shipping. Also make sure the outer case is manufactured in compliance with Airline Transport Association (ATA) standards. Handles, latches, wheels, and locks should be recessed into the case. Replace the foam cushioning inside the case periodically, because with use, the cushioning will break down and no longer provide proper protection for the product.

Attach the shipping label using a FedEx tie-on tag, available at fedex.com or by calling 1.800.GoFedEx 1.800.463.3339.

Packaging Freight Shipments



Shipments that qualify as freight must be packaged accordingly. See the current FedEx Service Guide to determine if your shipment qualifies as freight.

For detailed information on preparing freight shipments, refer to Packaging Guidelines for Shipping Freight at fedex.com/packaging.

You must package your freight shipments to allow for stacking of other packages on top of your shipment. Make sure your freight shipments are banded and stretchwrapped to the pallet, with the bands running in both directions. (Pallet loads secured with only stretch-wrap are not acceptable.)

Avoid corrugated or fiberboard pallets. You must secure all freight shipments weighing 151 lbs. or more on a forkliftable base, compatible with pallet-jack usage. The minimum specifications for a typical base for forklift or pallet-jack configuration are illustrated above.

Express Freight Shipments

To lessen the possibility of damage or delay to your cargo, make sure that all single-piece cargo greater than 150 lbs. is banded on all sides with heavy-duty metal or break-resistant plastic banding.

If your cargo is a single piece contained within a hard-ened container (plywood, metal) and is greater than 150 lbs., it does not require banding if exterior locks or clamps are used. (Glue, nails, or screws are not sufficient.)

General Guidelines for Shipping Computer Parts and Peripherals

Whichever packaging method you use, you'll find the following tips helpful when packing specific items.

Monitors

Remove the base and any attachments from the monitor when possible. Ship the monitor face-down.

Printers

Remove printing cartridges before shipping, and place cartridges inside a sealed plastic bag to prevent ink or powder from leaking into the box. Tape moving parts such as doors and print heads to secure them during transit. Remove any paper trays and pack them separately.

Scanners

Most manufacturers recommend that you secure the scanner carriage to prevent movement when shipping. Refer to your owner's manual for more information.

Computer Housings With or Without Internal Components

Packaging designed for computer housings without internal components is usually designed for the weight of the empty housing. If you assemble and install inner components (such as circuit boards and disk drives), make sure your packaging can accommodate the increased weight. For security reasons, you may want to encrypt or remove any confidential data stored on the computer before shipping. Overbox shipments of assembled units in original packaging.

Data Storage Devices

F GTPISJQ S%ONFNFTSZDBFHOUFBUQTEST other data storage media, you should back up any data stored on the devices. For security reasons, you may also want to remove or encrypt any sensitive personal, confidential, or financial information. FedEx liability for loss of any electronic data is limited only to the cost of the medium on which the data is stored. See Liabilities Not Assumed in the current FedEx Service Guide.

Servers, Routers, Large Laser Printers

% VUFDHJHWBBMOWEBSXBCNBHOTEJ[FT of these units, we recommend that customers contact FedEx Packaging Services for packaging recommendations.

FedEx Package Testing and Design Services

We offer free package testing, evaluation, and design services that can help you avoid product damage. In some cases, we may even help you eliminate unnecessary packaging costs. We encourage you to submit a sample of your packaging for testing and evaluation. For a copy of our test procedures go to fedex.com/packaging or contact FedEx Packaging Services.

Testing Request Guidelines

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4. Place your completed application, your sample test package labeled "Test This Package," and any necessary cushioning material in a sturdy outer container marked "Overpacked/Test Pkg. Inside."
5. Send your shipment to the address indicated on the FedEx Packaging Test Application.

Custom-Designed Packaging

If you ship computers and peripherals frequently, you may also want to have your packaging custom designed. FedEx Packaging Services can provide guidance to you and your packaging supplier. For example, you may be interested in a customized foam cushion specifically designed to fit and protect your fragile computer and to pass all FedEx packaging tests. Our packaging engineers can help with your custom designs.

Contacts and Resources

- How to Pack guidelines at fedex.com/packaging.
- ' F E & B D L B H F J T B H F T F W F M P R O F O U packagingservices@fedex.com or 1.800.633.7019.
- ' F E & Y Q M E L B E J H J E F F S T pkgfield@corp.ds.fedex.com, or contact your FedEx account executive for a referral.

Bubble Wrap is a registered trademark of Sealed Air Corporation.

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Packaging Clinical Samples

Follow these instructions for packaging, marking, and labeling clinical samples for shipment via FedEx Express® services.

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Requirements for Clinical Samples

This guide outlines the requirements for shipping with FedEx Express. In addition, all shipments must comply with all applicable local, state, and federal laws governing packing, marking, and labeling. Blood, urine, fluids, and other specimens containing or suspected of containing infectious substances must be shipped according to applicable government, International Air Transport Association (IATA), and International Civil Aviation Organization (ICAO) regulations.

For the purposes of this guide, clinical samples are generally defined as non-infectious human or animal materials including, but not limited to, excreta, secreta, U J TBT OUEJ TG M RCJ MEBPOEE% " B Q Q S P W F E pharmaceuticals that are blood products.

General Packaging Requirements

For liquid clinical samples, you must include four layers of packaging:

1. **Primary watertight inner receptacle.** Use watertight containers for liquid specimens with a positive closure such as a screw-on, snap-on, or push-on lid, taped for an additional seal. If you place multiple fragile primary receptacles in a single secondary receptacle, they must be individually wrapped or separated to prevent contact between them.
2. **Absorbent material.** Place absorbent material between the primary and secondary receptacles, using enough material to absorb the entire contents of all primary receptacles. Acceptable absorbent materials include cellulose wadding, cotton balls, super-absorbent packets, and paper towels.
3. **Secondary watertight inner receptacle.** Use a watertight sealed plastic bag, plastic canister, or screw-cap can.
4. **Sturdy outer packaging.** Use rigid outer packaging constructed of corrugated fiberboard, wood, metal, plastic, or other equally strong material, including cylinders made of such materials and appropriately sized for the contents. Chipboard or paperboard boxes are unacceptable outer packaging. The completed packaging must be of good quality, strong enough to withstand the normal rigors of transportation without loss of contents as a result of vibration, changes in temperature, humidity, or pressure.

Acceptable Primary Watertight Receptacles

Taped plastic canister

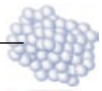
Taped glass or plastic jar

Taped glass or plastic vial

Acceptable Absorbent Materials

Cellulose wadding

Cotton balls



Super-absorbent packets

Paper towels

Acceptable Secondary Watertight Receptacles

Sealed plastic bag

Plastic container

Screw-cap can

Additional Packaging Requirements for Non-Infectious Clinical Samples

To ensure safe delivery of your clinical sample shipments, we provide these additional guidelines.

Liquid Clinical Sample Marking Requirements

Include a marking on the package that properly identifies the shipment as "Exempt Human Specimen" or "Exempt Animal Specimen" as appropriate to comply with current IATA and ICAO regulations. If you prefer, package markings may be in the form of a label.

Dried Samples

While non-infectious samples of dried blood, tissue, saliva, and hair are not dangerous goods and are not required to meet dangerous goods regulations, they do require special Q B D L B H N O F H E & Y Q S F V J E F M S J O B E N - ples, including but not limited to hair, swabs, or dried blood, must be placed into a sealed paper or plastic envelope and then into a 6" x 8" or larger mailing envelope or pak. Samples on glass or plastic slides must be cushioned and packaged in a sturdy outer container.

Note: If the dried sample is placed in a receptacle with a liquid preservative, then the minimum packaging standards for liquids must be followed.

FedEx Clinical Packaging Options

For your convenience, we offer the FedEx® Clinical Pak, the FedEx® Medium Clinical Box, and the FedEx® Large Clinical Box as packaging options for exempt clinical-sample shipments. We recommend the FedEx Clinical Pak for use when the sturdy outer packaging of your properly packaged shipment is smaller than 7" x 4" x 2" (minimum acceptable size).

To help ensure the timely delivery of your shipment and the safety of shipments exposed to yours, our clinical paks and boxes help your clinical shipments stand apart from other shipments. Previous FedEx Clinical Paks were made of plastics with a resin identification code of "7." If you still have unused paks with this identification code, contact your local municipality to determine the best way to recycle any unused packaging.

To order the FedEx Clinical Pak, go to fedex.com or call 1.800.GoFedEx 1.800.463.3339.

FedEx Clinical Pak

FedEx Medium Clinical Box, FedEx Large Clinical Box

Packaging Restrictions for Clinical Paks and Boxes

- 1 M B C T B J E D Q E B Q F O S W F B S R Q F B T D D F Q U B C M F outer containers.
- The FedEx Clinical Pak is an overwrap primarily designed for easy identification and to handle smaller completed packages. The general packaging requirements outlined on page 28 must be met.
- The FedEx® Envelope, FedEx® Tube, FedEx Pak®, FedEx® Padded Pak, FedEx® UN 3373 Pak, and FedEx boxes (other than FedEx clinical boxes), including FedEx brown packaging offered at FedEx shipping locations, are not acceptable as outer containers for clinical samples.
- The FedEx Clinical Pak can only be used to ship clinical samples. If you need an overwrap for shipments containing Biological Substance, Category B (UN 3373) materials, use the FedEx UN 3373 Pak and package your shipments according to IATA and ICAO regulations.
- The FedEx Clinical Pak must not be used to ship dried samples unless the dried samples are packaged following the requirements for liquid samples.

- 4IJQments marked or labeled 6.2 (infectious materials) and shipments containing dry ice cannot be shipped in a FedEx Clinical Pak.

If you have questions about whether your shipments require a biohazard label, consult the Occupational Safety and Health Administration (OSHA) for the applicable regulations.

NOTE: You may drop off properly packaged liquid clinical samples in most FedEx Express drop boxes in the U.S. and Puerto Rico.

- 'FE&GPJnDand Ship Center locations accept FedEx clinical shipments that are not classified as Biological Substance, Category B (UN 3373).
- 'FE&PS4MFSWFOEEiS locations accept non-infectious clinical shipments, as well as shipments classified as Biological Substance, Category B (UN 3373).
- 'FE&VUIPSJRE®Locations and FedEx ShipSite® (OfficeMax) locations do not accept clinical or UN 3373 shipments.

For more information, go to fedex.com or call 1.800.GoFedEx 1.800.463.3339 to be directed to a FedEx location equipped to handle these shipments.

FedEx Package Evaluation Services

We offer free package evaluation services, and we encourage you to submit a sample of your clinical packaging for evaluation.

Clinical Packaging Evaluation Request Guidelines

Follow these steps for submitting your packaging for evaluation. An active FedEx account number is required. You and your FedEx account executive should expect evaluation results via email in approximately five to seven business days from FedEx Packaging Services' receipt of your packaging.

1. Obtain a FedEx Packaging Test Application at fedex.com/packaging or by contacting FedEx Packaging Services at packagingservices@fedex.com or 1.800.633.7019.
2. Complete and sign your application, referencing the name of your FedEx account executive on the form.
3. Prepare a sample package including all the components in UIFY BDPUG JWSOBUFRPEQPFJUDMVEF any specimen(s). Indicate "Non-Hazardous Content" on the samples and on the sample outer box.
4. Place your completed application, any pertinent product documentation, and your sample clinical package labeled "Evaluate This Package" along with any necessary cushioning material in a sturdy outer container marked "Overpacked/Clinical Sample Inside."
5. Send your shipment to the address indicated on the FedEx Packaging Test Application.

Contacts and Resources

- How to Pack guidelines at fedex.com/packaging.
- 'FE&YBOH(PPET) B[.BSJFS)VNBO4FSWJDFT at 1.800.GoFedEx 1.800.463.3339; press "81" or say "dangerous goods."
- 'FE&YBOH(PPETFRVJSFNFOUT fedex.com/us/service-guide/our-services/dangerous-goods-hazmat/index.html.

NOTICE:

FedEx Express will refuse to accept packages that do not meet FedEx Express, government, or IATA and ICAO requirements. This brochure is in no way intended to replace requirements mandated by 49CFR and IATA. This is for informational purposes only.

5ZWIBSFHJTUSBUJPONPWBSEQBOZ

NOTICE: This packaging brochure is provided to FedEx customers to help reduce loss or damage due to improper packaging. It is NOT intended to be a comprehensive guide for packaging items we accept for transit. We make no warranties, expressed or implied, regarding this information. Proper packaging is the sole responsibility of the shipper. For more information and comprehensive guidelines, contact UI'FE&YBOH(PPETFRVJSFNFOUT) B[.BSJFS)VNBO4FSWJDFT at 1.800.GoFedEx 1.800.463.3339; press "81" or say "dangerous goods." Refer to the current FedEx Service Guide for terms, conditions, and limitations applicable to FedEx® delivery services.
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Packaging UN 3373 Shipments

Follow these instructions for packaging, marking, and labeling Biological Substance, Category B (UN 3373) shipments for FedEx Express® services.

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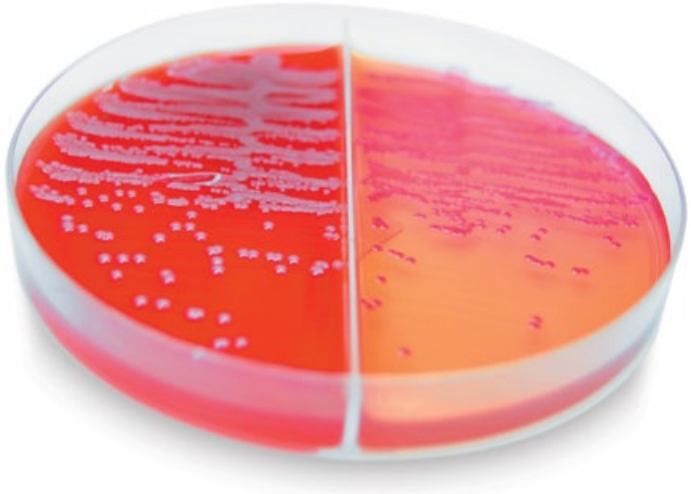

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Requirements for Biological Substance, Category B (UN 3373) Shipments

This guide outlines the requirements for shipping with FedEx Express. In addition, all shipments must comply with all applicable local, state, and federal laws governing packing, marking, and labeling. Blood, urine, fluids, and other specimens containing or suspected of containing infectious substances must be shipped according to applicable government, International Air Transport Association (IATA), and International Civil Aviation Organization (ICAO) regulations.

Customers who ship Biological Substance, Category B (UN 3373) shipments must comply with local, state, and federal laws governing identification, classification, packaging, and package markings (which may be in label form). FedEx Express strictly adheres to the IATA, ICAO, and U.S. government guidelines for materials categorized as Biological Substance, Category B (UN 3373).

General Packaging Requirements

For Biological Substance, Category B (UN 3373) shipments, cushioning material is required for both liquid and dried specimens. You must also include four layers of packaging:

1. **Primary watertight inner receptacle.** Use primary receptacles made of glass, metal, or plastic with a positive means of ensuring a leakproof seal; a skirted stopper or metal crimp seal must be provided; screw caps must be reinforced with adhesive tape. For liquid specimens, the primary receptacle must not contain more than 1 L. For dried specimens, the primary receptacle must not exceed the outer packaging weight limit.
2. **Absorbent material.** Place absorbent material between the primary and secondary receptacles, using enough material to absorb the entire contents of all primary receptacles. Absorbent material is required for Biological Substance, Category B (UN 3373) shipments containing liquids. Acceptable absorbent materials include cellulose wadding, cotton balls, super-absorbent packets, and paper towels.
3. **Secondary watertight inner receptacle.** Use a secondary container that is leakproof for liquid specimens or siftproof for dried specimens. Choose only secondary containers certified by the manufacturer for Biological Substance, Category B (UN 3373) prior to use. Either your primary or secondary receptacle must be able to withstand, without leakage, an internal pressure differential of not less than 95 kPa in the range of -40 C to 55 C (-40 F to 130 F). To prevent contact between multiple fragile primary receptacles, individually wrap or separate them inside the secondary container.
4. **Sturdy outer packaging.** Use rigid outer packaging constructed of corrugated fiberboard, wood, metal, or plastic, or other equally strong material, including cylinders made of such materials and appropriately sized for the contents. Chipboard or paperboard boxes are unacceptable outer packaging. The completed packaging must be of good quality, strong enough to withstand the normal rigors of transportation without loss of contents as a result of vibration, changes in temperature, humidity, or pressure. Limit the total volume for liquid samples to 4 L and the total weight of dried samples to 4 kg per outer container. At least one surface of the outer packaging must have a minimum dimension of 100 mm x 100 mm (4" x 4"). Completed packages must be able to withstand a 4' (1.2-m) impact test as outlined in IATA 6.6.1 regulations. Before sealing the outer packaging, you must make an itemized list of the contents of the package and enclose the list between the secondary packaging and outer packaging.

Acceptable Primary Receptacles

Taped plastic canister

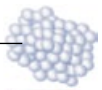
Taped glass or plastic jar

Taped glass or plastic vial

Acceptable Absorbent Materials

Cellulose wadding

Cotton balls



Super-absorbent packets

Paper towels

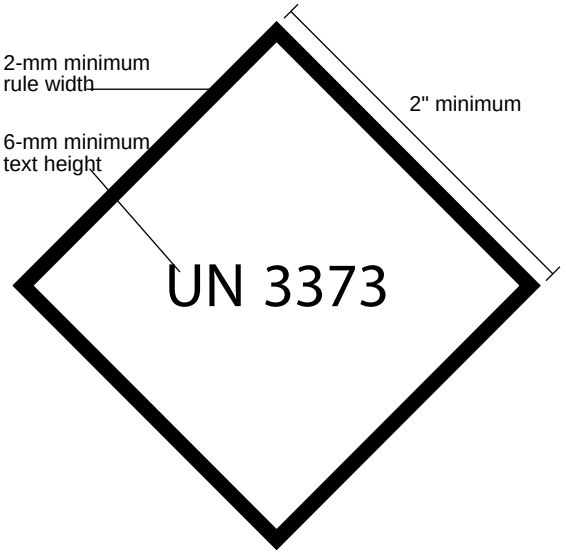
Acceptable Secondary Receptacles

Sealed plastic bag

Plastic container

Screw-cap can

Biological Substance, Category B (UN 3373)
Marking Requirements



"Biological Substance, Category B" must appear in 6-mm-high text on the outer package adjacent to a diamond-shaped mark like the one shown here. The UN 3373 marking must be in the form of a square set at an angle of 45 degrees. Each side of the UN 3373 diamond should measure a minimum of 2" (50 mm). The width of the diamond rule line must be a minimum of 2 mm, and the letters and numbers must be at least 6 mm high.

Biological Substance, Category B (UN 3373) Marking Requirements

- \$ M F B B M Z P M V H C D B B O U F H P S Z 6-mm-high text on the outer package adjacent to a properly sized UN 3373 diamond-shaped marking. If you prefer, package markings may be in the form of a label.
- * P T U F I ' E ® & Medium Clinical Box or the FedEx® Large Clinical Box to ship samples classified as Biological Substance, Category B (UN 3373), you must add a properly sized UN 3373 diamond-shaped marking. If you prefer, package markings may be in the form of a label.
- * P T U F I ' E ® & 3373 Pak, FedEx Medium Clinical Box, or FedEx Large Clinical Box, duplicate all required dangerous goods markings on each package J O T U J E F W F Q U M E D J O U F O T J E F the pak.
- The name and telephone number of a person responsible must be marked on the package or provided on the airbill.
- 5 I F O B M F O E E E S P H T T F I J Q D J Q J F O U must be marked on the package.

FedEx UN 3373 Packaging Options

For your convenience, we offer the FedEx UN 3373 Pak, the FedEx Medium Clinical Box, and the FedEx Large Clinical Box as packaging options for your Biological Substance, Category B (UN 3373) shipments. We recommend the FedEx UN 3373 Pak for use when the sturdy outer packaging of your properly packaged shipment is smaller than 7" x 4" x 2" (minimum acceptable size).

To help increase your operational efficiencies and clearly identify this type of shipment, the FedEx UN 3373 Pak is preprinted with the required IATA UN 3373 marking, the proper shipping name, and the OVERPACK marking. FedEx clinical boxes will require the addition of proper IATA UN 3373 markings when used to ship Biological Substance, Category B (UN 3373) shipments.

The FedEx UN 3373 Pak can only be used to ship Biological Substance, Category B (UN 3373) shipments. If you need an overwrap for exempt clinical and environmental test sample shipments, use the FedEx® Clinical Pak.

To order the FedEx UN 3373 Pak, go to fedex.com or call 1.800.GoFedEx 1.800.463.3339.

FedEx Clinical Pak

FedEx Medium Clinical Box, FedEx Large Clinical Box

NOTE: Biological Substance, Category B (UN 3373) shipments are accepted at FedEx Express® % S#PRQY locations in the U.S. and Puerto Rico. FedEx Authorized ShipCenter® locations and FedEx ShipSite® locations (such as OfficeMax) do not allow such shipments. Go to fedex.com or call 1.800.GoFedEx 1.800.463.3339 to be directed to a FedEx location that can accept these shipments.

The FedEx Medium Clinical Box and the FedEx Large Clinical Box may be used to ship either non-infectious clinical samples or samples classified as Biological Substance, Category B (UN 3373), but they must be properly labeled. The shipper assumes sole responsibility for compliance with all applicable governmental regulations.

FedEx Office® Print and Ship Center locations, FedEx ShipSite locations, and FedEx Authorized ShipCenter locations in the U.S. do not accept shipments classified as Biological Substance, Category B (UN 3373). Go to fedex.com or call 1.800.GoFedEx 1.800.463.3339 to schedule a FedEx Express pickup, or to be directed to a FedEx location equipped to handle these shipments.

Packaging Restrictions

- 1 M BC T B E D Q E B C F O W F B S V R Q I B T D D F Q U B C M F outer containers.
- 5 I F F E & Y Velope, FedEx® Tube, FedEx® Pak, FedEx® Padded Pak, and FedEx boxes, including FedEx brown packaging offered at FedEx shipping locations, are not acceptable as outer containers for Biological Substance, Category B (UN 3373) shipments.
- 5 I F F E & M J C B D B O C N T U E P I J Q Biological Substance, Category B (UN 3373) shipments.
- 0 O T M Z J Q N D F M O B U T E # C J M 4 M C D B M O D F Category B (UN 3373) can be shipped in the FedEx UN 3373 Pak.
- # J P M 4 M C D B S Z T I J Q N F O U T that are shipped refrigerated, frozen, on dry ice, or in liquid nitrogen must comply with current IATA and ICAO regulations.

If you have questions about whether your shipments require a biohazard label, consult the Occupational Safety and Health Administration (OSHA) for the applicable regulations.

FedEx Packaging Services

FedEx Packaging Services offers package development consultation services. The FedEx Packaging Services lab does not test packaging containing Biological Substance, Category B (UN 3373) materials.

Contacts and Resources

- How to Pack guidelines at fedex.com/packaging.
- ' F E & Y B O H (F S P E V T) B [B S J E F S V B M T J O F 1.800.GoFedEx 1.800.463.3339; press “81” or say “dangerous goods.”
- ' F E & Y B O H (F S P E V F T N J B O K S B C J E U fedex.com/us/service-guide/our-services/dangerous-goods-hazmat/index.html.

NOTICE:

FedEx Express will refuse to accept packages that do not meet FedEx Express, government, or IATA and ICAO requirements. This brochure is in no way intended to replace requirements mandated by 49CFR and IATA. This is for informational purposes only.

NOTICE: This packaging brochure is provided to FedEx customers to help reduce loss or damage due to improper packaging. It is NOT intended to be a comprehensive guide for packaging items we accept for transit. We make no warranties, expressed or implied, regarding this information. Proper packaging is the sole responsibility of the shipper. For more information and comprehensive guidelines, D P O U E H E & B O H (F S P E V T) B [B S J E F S V B M T J O F (P ' F E & Y Q S F T W P B E B H F S V S ' F E & Y W J D F P S S I P U O E J U J P O T and limitations applicable to FedEx® delivery services.
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Automotive and Mechanical Parts Packaging Guidelines and Designs

Responsible packaging can save you money and improve the safety and handling of your shipments. Follow these tips and design recommendations.

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General Guidelines

- 1 BEEM MBSEQHDFF SOBFOSEVSSQTBSTVUBBTT sheet metal or bare metal.
- 1 BPED P WQSSF D J T J P OSNFBQTBJSTOVFDE as threads and fittings.
- 1 S P HRQDMUSUBTSTFV T D FUQRUBJNCEHVFF P dents, scratches, and scuffing by using an appropriate amount of cushioning material and placing in a sturdy shipping container.
- 1 M EEDPED V N FBOTBJUQQSOVMJBOPFOMT flat surfaces that will allow for maximum adhesion. Avoid placing labels around curved surfaces.
- 1 M BBDMFBOPFOMTFJXEFUIM B S H F T U surface area.
- 6 T'FF E &JYFUBOHJS F MDBSOBFQMMT BBTJUSJ D bill pouches instead of wire tags.

Automotive Parts Best Practices

- 4 I JFQO H JNOPFUTDSTB O T NBJODEJBPTQTBST U T via FedEx Express® services.
- % S BJDEN QUBZSUMTMUFV C SGJNDVBJDEUT before shipping or demonstrate that the shipment is leakproof under all orientations.
-) F MSQE EVBNBHOEO TTVSXF S L J O H conditions for handlers by adequately packaging all mechanical or automotive parts.

Shipping Methods and Minimum Packaging Requirements

You are responsible for proper packaging when shipping; these tips should be helpful when packaging specific items. If items are not fully encased in an outside shipping container, an additional handling surcharge may apply. For complete terms and conditions, see the current FedEx Service Guide.

FedEx may reject any parts packaging that does not meet the minimum shipping standards for acceptance.

Shipping in Corrugated Boxes

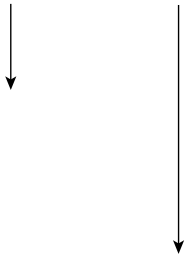
When packaging parts, use adequate dunnage such as loosefill peanuts or other padding material to fill void spaces and prevent movement inside the box.

Wheels

Cushion the entire surface, and box chrome, painted, and decorative wheels that are susceptible to damage as a result of scratches or scuffing. Wrap non-decorative wheels in adequately taped clear plastic liner.

Flexplates, Flywheels

Pack flexplates and flywheels with adequate dunnage such as loosefill peanuts to fill void spaces in double- or triple-wall corrugated boxes, depending on the weight of the part. Apply “heavy” stickers to boxes exceeding 75 lbs.



Car Doors, Hoods, Panels

Cushion and box all exposed metallic surfaces that are susceptible to damage as a result of scratches or dents.

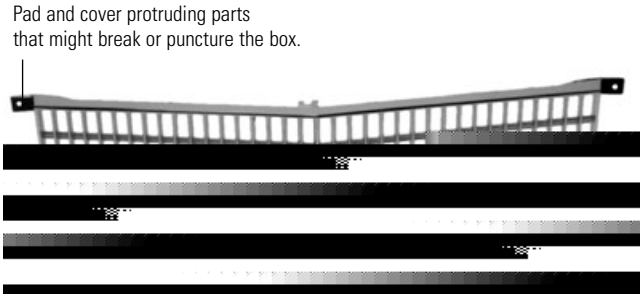
Decorative Parts

Cushion and box all decorative parts such as grills that

may be unusable as a result of scratches, dents, bending, or scuffing.

Flexible Plastic Moldings

Cushion and box all flexible plastic moldings to prevent breakage or tearing.



Shocks, Coil Springs

Box cylindrical parts that can be packaged in tubes with adequate dunnage such as padding at the ends and loosefill peanuts to prevent puncturing through the end closures. Tag coil springs with a FedEx non-conveyable tie-on tag and adhere the shipping label to the tie-on tag if the item cannot be packaged in a tube or corrugated box.

Bumpers

Box bumpers that are susceptible to scratches or dents. Or wrap bumpers in adequately taped heavy-duty plastic bags and padding to protect any sharp or pointed corners.

Shipping With Secure Wrapping and Padding

When preparing irregular-shaped parts for shipment, tape cushioning material securely to help prevent removal during the handling process. We recommend placing the parts in a box in addition to the minimum requirements shown.

Moldings

Wrap non-decorative plastic moldings in adequately taped plastic film or bags, or cushion and box them.

Sway Bars, A-Arms

Wrap sway bars, A-arms, and threaded rods in fiberboard or appropriate plastic film or bags and tape securely.

Exhaust System Parts, Leaf Springs

Pad and cover pointed and sharp edges with corrugated boards, adequate foam, or air-cellular cushioning material such as Bubble Wrap® and tape securely.