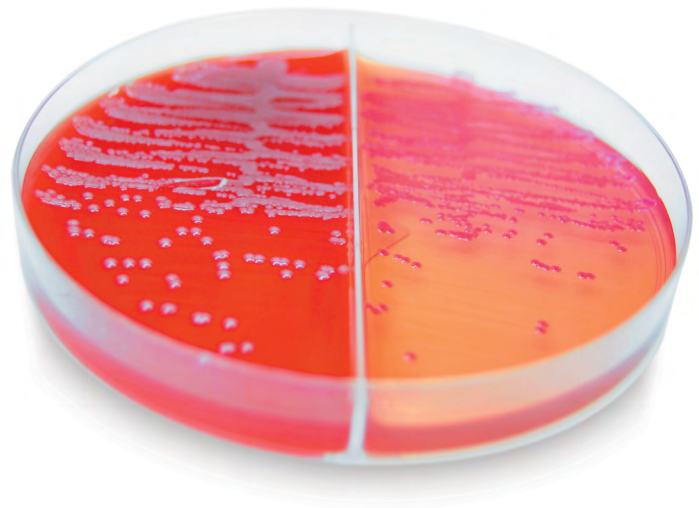




Packaging UN 3373 Shipments

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



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

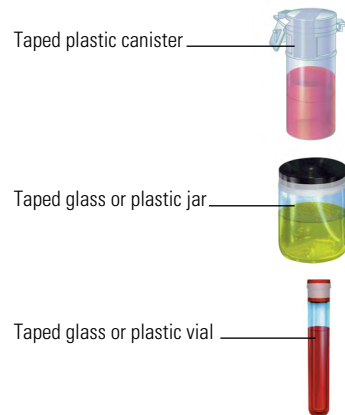
For Biological Substance, Category B (UN 3373) shipments, cushioning material is required for both liquid and dried specimens. You must include four layers of packaging:

- 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

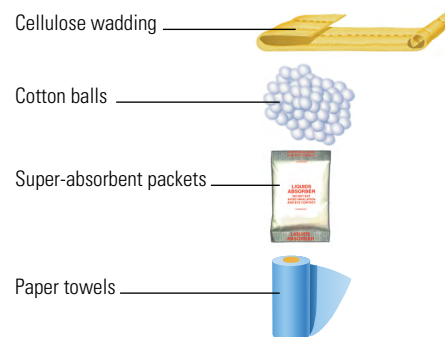
withstand, without leakage, an internal pressure differential of not less than 95 kPa in the range of -40°C to 55°C (-40°F to 130°F). To prevent contact between multiple fragile primary receptacles, individually wrap or separate them inside the secondary container.

- 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. 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



Acceptable Absorbent Materials



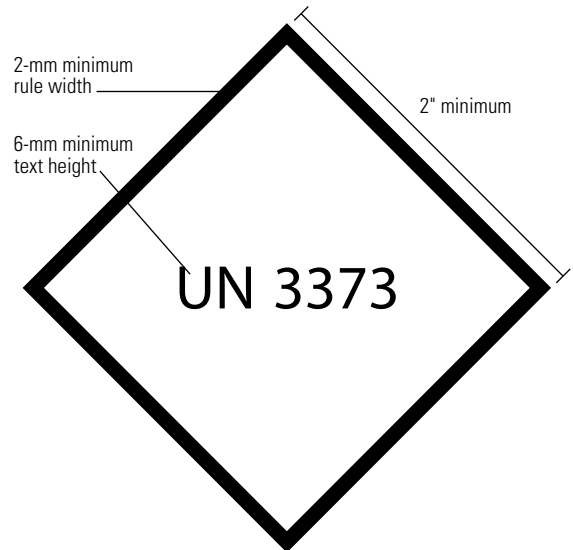
Acceptable Secondary Receptacles



Biological Substance, Category B (UN 3373) Marking Requirements

- Clearly mark “Biological Substance, Category B” in 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.
- If you use any of the following clinical or Temp-Assure® boxes 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: FedEx® Medium Clinical Box; FedEx® Large Clinical Box; Small Cold Box (2–8°) Standard Duration (48 Hours); Medium Cold Box (2–8°) Standard Duration (48 Hours); Medium Cold Box (2–8°) Extended Duration (96 Hours); Large Cold Box (2–8°) Standard Duration (48 Hours); and Large Cold Box (2–8°) Extended Duration (96 Hours).
- If you use the FedEx UN 3373 Pak, duplicate all required dangerous goods markings on each package inside the overpack. Do not place dry ice inside the pak.
- The name and telephone number of a person responsible must be marked on the package or provided on the airbill.
- The name and address of the shipper and recipient must be marked on the package.

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.

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.

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](https://www.fedex.com) or call 1.800.GoFedEx 1.800.463.3339.

FedEx UN 3373 Pak



FedEx Medium Clinical Box, FedEx Large Clinical Box



FedEx UN 3373 Packaging Options for Purchase

FedEx offers five cold shipping boxes as part of the FedEx Temp-Assure portfolio of products for purchase. These boxes can be used as outer packaging to ship temperature-sensitive specimens designated as Biological Substance, Category B (UN 3373) with FedEx Express services.

Each box includes a chilling unit activated by the shipper and placed in the box with the shipment. The unit continuously evaporates small amounts of water at low pressure, keeping the shipment at 2°C to 8°C for up to 48 or 96 hours,* depending on the packaging option chosen.



*Actual cooling duration varies, depending on external temperatures.

Packaging Restrictions

- Plastic bags and paper envelopes are unacceptable outer containers.
- The FedEx® Envelope, 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.
- The FedEx Clinical Pak cannot be used to ship Biological Substance, Category B (UN 3373) shipments.
- Only shipments classified as Biological Substance, Category B (UN 3373) can be shipped in the FedEx UN 3373 Pak.
- Biological Substance, Category B (UN 3373) shipments 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.

The FedEx Medium Clinical Box, the FedEx Large Clinical Box, and the following Temp-Assure cold shipping boxes 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: Small Cold Box (2–8°) Standard Duration (48 Hours); Medium Cold Box (2–8°) Standard Duration (48 Hours); Medium Cold Box (2–8°) Extended Duration (96 Hours); Large Cold Box (2–8°) Standard Duration (48 Hours); and Large Cold Box (2–8°) Extended Duration (96 Hours). The shipper assumes sole responsibility for compliance with all applicable governmental regulations.

NOTE: Biological Substance, Category B (UN 3373) shipments are accepted at FedEx Express® Drop Box locations in the U.S. and Puerto Rico. FedEx Office® Print and Ship Center locations, FedEx Authorized ShipCenter® locations, FedEx ShipSite® locations (such as OfficeMax), and FedEx OnSite locations (such as Walgreens) do not allow such shipments at the counter; however, these shipments are accepted in FedEx Express Drop Boxes at these locations. 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..

FedEx Packaging Services

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

Contacts and Resources

- *How to Pack* guidelines at **fedex.com/packaging**.
- FedEx portfolio of temperature-controlled solutions at **fedex.com/us/temp-assure**.
- FedEx Dangerous Goods/Hazardous Materials Hotline, 1.800.GoFedEx 1.800.463.3339; press “81” or say “dangerous goods,” then press “4” for the next available dangerous goods agent.
- FedEx Dangerous Goods seminars and job aid at **fedex.com/dangerousgoods**.

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, contact the FedEx Dangerous Goods/Hazardous Materials Hotline at 1.800.GoFedEx 1.800.463.3339; press “81” or say “dangerous goods,” then press “4” for the next available dangerous goods agent. Refer to the current FedEx Service Guide for terms, conditions, and limitations applicable to FedEx® delivery services.

© 2018 FedEx. All rights reserved.

28437PM-Rev. 12/18