

## SHIPPING INSTRUCTIONS

If you have any questions about preparing your shipment or need any assistance, ask your primary beamline contact. Only printed material and media going to a domestic location may be shipped using the on-site FedEx and UPS drop boxes. **All** other items must go through Argonne's shipping and receiving department, even if they are non-hazardous.



Please do not transport hazardous materials in your personal vehicle.



If you decide to leave chemicals, chemical waste, samples, supplies, or other materials at the APS, be sure to let your primary beamline contact know.

## PACKING THE SHIPMENT

Typically, we try to re-use the packaging everything was originally shipped in. Make sure the contents of the shipment are easy to identify. Everything should be clearly labeled.

1. Chemicals need to be packaged in compatible containers. Containers should be no more than 80% full to allow for expansion during transport. Liquid chemicals should be surrounded by absorbent material sufficient enough to absorb the total liquid contents in case of breakage.



Nanomaterials require special packaging and are described on the last page.

2. Hardware, tools, and lab supplies of little value and similar type can be grouped together as "lab supplies," "BNC cables," "plumbing hardware," etc.. Supplies and chemicals can be mixed in the same box.
3. Pack the shipment so that it will safely arrive at the shipping and receiving department. Every carton in the shipment will be opened at shipping and receiving to have its contents inspected, so do not permanently seal the outermost carton.
  - a. If there are multiple boxes in the shipment, please number the boxes.

## ENCLOSE SDS

Please provide SDS (safety data sheets, **not** MSDS) for **every chemical** in the shipment. For materials that are synthetic or otherwise do not have a SDS, please provide a SDS that will be a good approximation of the hazards of the materials. If the SDS is already printed, it should be enclosed in the box containing that material. Electronic SDSs in PDF form can also be sent via email. Any missing SDS sheets will cause a delay in the shipment leaving Argonne.

## PREPARING THE SHIPPING MANIFEST

The shipping form should be completely filled out. Please print or type the information into the form so it is legible. Issues that commonly delay shipments include undeclared hazards, incomplete descriptions, and undeclared values. Every item in the shipment should be easily correlated to a line item on the form. Any discrepancy between what was packed and what the form reflects will cause a delay until it can be straightened out.

1. Date required at destination

If the contents of the shipment require special handling or need to be refrigerated or frozen, speak to your primary beamline contact to ensure the samples are kept at the right temperature and the correct shipping method is used. If the line is left blank, we will specify a date two weeks from the current date.

2. User/carrier information

Please completely fill in the user and carrier information. A FedEx or UPS shipping account number (or APS user account cost code) must be provided to process the shipment. Argonne does not accept prepaid shipping labels.

3. Line item description

Itemize everything that is being shipped on the manifest. Chemicals **must** be described by their names and not with formulas.

4. Quantity

The quantity of a material must be specified. For example: 5 vials each containing 10mL buffer solution, 500mg, one bundle of cables, one box of syringe needles, one bag of miscellaneous lab supplies, etc.

5. Physical form

Chemicals and hazardous materials **must** have their physical form listed: solid, liquid, or gas.

6. Value

Estimate the unit price or market value of each line item.

7. Hazards

List up to three hazards from the list that most accurately describe the material.

The CMS group shipper will verify the contents of each box and fill out a shipping form for Argonne National Laboratory and tender it to the lab's shipping and receiving department. The shipping and receiving department will check the each carton's contents again to classify the shipment and ensure it complies with the US department of transportation regulations before tendering it to a carrier.

**SPECIAL DIRECTIONS FOR PACKING ENGINEERED NANOMATERIALS**

Nanomaterials must be packaged so they are double contained and cannot be accidentally opened.

<ol style="list-style-type: none"> <li>1. Place the nanomaterial into a chemically compatible container and hermetically seal it. The container should have enough room in it to allow for expansion during transport.</li> <li>2. Label the container with its contents and concentration</li> <li>3. Place the container into intermediate packaging with sufficient cushioning to prevent damage to the inner container and surrounded by absorbent material sufficient enough to absorb the total liquid contents in case of breakage</li> <li>4. Seal the intermediate packaging with tape to prevent unintentional opening</li> <li>5. Affix a warning label on the outside of the intermediate packaging</li> </ol>	
	<p>A good example of nanomaterial packaging: a reagent bottle containing palladium nanoparticles in toluene has had its lid taped shut. It was wrapped with an absorbent pad and placed in a zip top bag. The zip top bag has been taped shut to prevent accidental opening and a warning label has been affixed to it.</p>

