

TDG CHEMICAL SHIPPING PROCEDURES

Chemicals (including samples) being shipped by land or air pose a hazard if the chemical(s) are not packaged properly. Specific requirements that are set out by Transport Canada and Transportation of Dangerous Goods (TDG) for shipment by ground, and International Air Transport Association (IATA) for shipment by air must be met when shipping samples from the University.

These requirements include the proper classification, packaging and labelling of the samples for transport. Pure chemicals will almost always have a classification and shipping name of their own and can be found directly in Schedule 3 of the TDG Clear Language Shipping Guide. When shipping a pure chemical (manufactured product) it is highly recommended that the shipment is made directly from the supplier to the location as the supplier has all the proper shipping documentation and packaging in place already.

General TDG Information

To properly package the sample(s) according to the regulations the properties of the material being shipped must be known. It is the responsibility of the researcher/technician to identify the hazards associated with the material so that the shipper (consignor) can properly classify, label and document the shipment.

“The consignor is responsible for determining the classification of dangerous goods. This activity is normally done by, or in consultation with, a person who understands the nature of the dangerous goods such as a manufacturer, a person who formulates, blends or otherwise prepares mixtures or solutions of goods or, in the case of infectious substances, a doctor, scientist, veterinarian, epidemiologist, genetic engineer, microbiologist, pathologist, nurse, coroner or laboratory technologist or technician.”
(TDG Clear Language, section 2.2)

The shipping of a sample requires completion of the TDG form through a 4-step process before the sample(s) can be safely and properly shipped.

It is essential that all documentation in these steps be properly completed, signed by the appropriate party and that copies of these records be kept by the Central Stores shipper (for 2 years) in the event that they need to be produced for authorities as a legal document at a future date.

Completing the TDG Chemical Shipping Form

Access the TDG Chemical Shipping Form on the [Central Stores Shipping page](#).

Step 1: Hazard Identification

This section is filled-out by the requestor (laboratory) in consultation with their supervisor.

[Schedule 3 of the Transportation of Dangerous \(TDG\) Goods Regulations](#) lists common chemicals that have a specific shipping name associated with them however “samples” will not be found in this schedule. As a result, the researcher/technician, using their knowledge of the processes involved in making the sample, including SDS information, will be required to identify the hazards associated with the sample.

1. **If you are shipping a pure chemical or a manufacturer’s product then it is highly recommended that you get the chemical shipped directly from the manufacturer as they already have all the necessary packaging and shipping documents in place.**
2. If you are shipping multiple chemicals then each chemical requires a TDG form.
3. If the material is explosive, a gas, or a radioactive or infectious material then email the Safety Office at esf@uwaterloo.ca. If not, then proceed.
4. Complete the form as follows:
 - a. Assign the sample an ID that will be unique to this sample within the package, usually the chemical name is best.
 - b. Indicate whether the material is a Liquid or Solid.
 - c. Circle No/Yes regarding hazard classification, and if Yes, circle the waste class indicated next to it.
 - d. Print your name, sign, and date the document, and have your supervisor print and sign their name.
 - e. Make sure that the lab of origin field has the building and room #.
 - f. Make sure all signatures and names are included.

To proceed to the next step email the Environmental Safety Technician at esf@uwaterloo.ca with:

1. Include in your email:
 - a. The full name of the chemical that you are shipping.
 - b. If this is a sample that you have created in the lab that has no formal chemical name and contains multiple chemicals then list those chemicals.
 - c. The amount that you are sending (e.g., 5 X 4 gram samples).
 - d. Full address of where you are sending it.
2. Attach the documents:
 - a. The TDG shipping form with Step 1 Completed
 - b. The SDS of all the chemicals being shipped out

Step 2: Determination of Tentative Shipping Name, UN # and Packing Group (by ESF technician)

Once hazardous identification has been done the material can be assigned a proper shipping name and UN number, which the shipper (consignor) can use to process the shipping manifest. The Environmental Safety Technician will complete Step 2 of the TDG Shipping Form.

Step 3: Determination of Appropriate Packaging of the Sample (by Central Stores Shipper)

1. The technician (or designate) will contact the Central Stores Shipper who will assist with determining the maximum sample size that can be packaged based on the shipping name and UN # that has been assigned to the sample(s). They will also determine whether the courier can/will deliver the package to the destination.
2. The Environmental Safety Technician, using information from the Central Stores Shipper, will complete Step 3 of the form and return the form to the requestor along with proper packing instructions and if the package requires a customs letter.

Step 4: Packaging of Sample (by Requestor)

This needs to be done by the requestor in consultation with the ESF technician and Central Stores shipper and is based on their knowledge of the sample properties as well as TDG/IATA regulations and will include:

1. Individual vial volume/weight limits as well as total volume/weight that can be sent
2. Whether the sample should be packed in a glass, plastic or metal container
3. What absorbent material will best contain the material should the initial container fail
4. What secondary containment should be used to contain the sample container (e.g., plastic bag, secondary bottle)
5. What packing material should be used to prevent breakage of the container (e.g., bubble wrap, packing peanuts, paper)
6. What type of outer package needs to be used (possibly UN approved box)
7. The requestor will sign-off on step 4 (bottom of form)

To order containers and UN-approved packaging, go to the [Compliance Center's website](#) for a complete list of containers and packaging materials.

Completing a Customs Letter

The requestor will be notified by the environmental safety technician during STEP 3 if a customs letter is required. If it is required, download the Customs Letter Template and:

1. Insert the date.

2. Fill out Senders Information (IN FULL).
3. Describe the contents of the package. Include the chemical name, number of containers, and volume of each container. For example, Synomag D-70, 4 vials, 0.5 mL per vial.
4. Provide a reason for the shipment. For example, “For Research Purposes”.
5. Fill out the Receiver Information (IN FULL).
6. Edit the line “These samples are non-toxic and non-hazardous”
 - a. If your samples are toxic or hazardous (as confirmed by the ESF technician and Central Stores Shipper), delete this line.
 - b. If your samples are non-toxic and non-hazardous, keep the line as is.
7. Sign the document.

Delivering the Package to Central Stores Shipping

Once the package is ready to go a 2Ship Shipping Form must be completed and attached to the package. You need to request access to this tool and this is usually done by a designate in the department, however, some researchers have access to the [2Ship site](#).

When creating the shipment request on 2Ship, the following documents must be uploaded:

1. SDS sheets for all of the chemicals being sent (these need to be from the company that the chemicals were purchased from and must be up-to-date)
2. Completed TDG Shipping form(s)
3. Customs Declaration Form (on UW letterhead) for all shipments outside of Canada

Print the 2Ship shipping form and attach it to the outside of the package. The package can either be delivered directly to Central Stores or placed in a mail pick-up area with the 2Ship shipping form clearly visible.

All copies of declarations are signed and dated by the appropriate parties. Copies will be kept by the Central Stores shipper for a period of 2 years.