

3. Procedures for transporting chemicals within OCAD U

Purpose for this Procedure

1. To ensure that chemical products are moved from place to place within the facility in a safe manner, and reduce the risk of spills or other incidents.

1. Compressed Gas Cylinders

a) Empty or Full Gas Cylinders – Nominal Height under 38 cm (Except Acetylene)

1. Gas cylinders having a nominal height (i.e. base to top of valve cap) under 38 cm are permitted to be manually carried from place to place by personnel, so long as the valve stem is protected by a valve cap or other device that prevents leakage or release if the cylinder is dropped or damaged.
2. If it is impractical to manually carry cylinders of these sizes from place to place, you must use a small cylinder cart as shown here.
3. If necessary to transport between levels in the building, these cylinders may be taken onto elevators, but only outside of public access hours.



b) Empty or Full Gas Cylinders – Nominal Height 38 cm or More (Except Acetylene)

1. Gas cylinders having a nominal height (i.e. base to top of valve cap) of 38 cm or more must be transported using a gas cylinder cart of the type shown in 2.1 above (for cylinders having diameters under 11 cm), or a dolly (for larger cylinders), as shown here.
2. When using the dolly for transporting large cylinders,
 - ensure that the cylinder is secured in position by the strap
 - ensure that the valve is fully closed and the valve cap is in place
 - never leave the dolly unattended
 - always keep the dolly in the upright or 4-wheel tilted position
 - never allow the dolly with a cylinder to rest with the cylinder “lying down” in the horizontal position
3. If necessary to transport between levels in the building, large cylinders requiring dolly transport are not to be taken onto public usage elevators nor onto escalators, and can only be elevated using the service elevator(s)
4. Never transport large cylinders through public access areas during public access hours.



c) Acetylene Cylinders

1. Acetylene cylinders must always be transported using a cart or dolly
2. When using the dolly for transporting large cylinders,
 - ensure that the cylinder is secured in position by the strap
 - ensure that the valve is fully closed and the valve cap is in place
 - never leave the dolly unattended
 - always keep the cylinder in the upright tilted position – this is particularly important for acetylene cylinders because they contain a liquid solvent
 - never allow the dolly with a cylinder to rest with the cylinder “lying down” in the horizontal position – this is particularly important for acetylene cylinders because they contain a liquid solvent
3. If necessary to transport between levels in the building, acetylene cylinders are not to be taken onto public usage elevators nor onto escalators, and can only be elevated using the service elevator(s).
4. Never transport acetylene cylinders through public access areas during public access hours.

2. Solids and Liquids in Supplier Containers or Secondary / Portable Containers **Supplier Boxed Shipments (Dock Area to User Storage Location)**

1. For hazardous chemicals delivered in boxes (e.g. plastic or glass container(s) inside of a packing box), or in bulk primary containers up to 20 liters, either of the following types of carrier should be used to transport the item(s) from the chemical storage room to the user’s storage location.
2. Chemical kits that are shipped by suppliers in a boxed or containerized format that is inherently protected and designed to contain spillage (may be transported by being manually carried, or in accordance with Section 3 (b)).
3. When using this type of carrier for transporting hazardous chemicals,
 - a) load the bottom shelf before loading the top shelf (be careful to avoid strains and sprains when lifting and bending)
 - b) make sure that the total weight of the load on the top shelf is not more than about half the weight of the load on the bottom shelf (this keeps the center of gravity low, making it easier to handle, and reducing risk of toppling over)
 - c) never pile objects on the top shelf at a height that obstructs your view when pushing the carrier
 - d) never stack boxes two high or higher on a shelf without securing the load using straps or heavy tape
 - e) never leave the carrier unattended while in transit
4. The carrier shown above must not be used for transporting any compressed gas.
5. If necessary to transport between levels in the building, these are not to be taken onto public usage elevators during public access hours, and can only be elevated using the service elevator(s) during public access hours. If it is not possible or practical to use service elevator(s) after public access hours, then public usage elevators or escalators may be used.
6. Never transport hazardous chemicals using these carriers through public access areas during public access hours.



3. Individual Bottles / Containers

1. Transporting individual containers of hazardous chemicals that are not held inside of a kit or other type of secondary container should be avoided if possible.
2. If it is necessary to transport individual bottles or containers of hazardous chemicals, use either of the types of carriers shown. If the cart for individual bottles and chemicals is used, ensure that the containers placed inside the drawers are secured against tipping over while in transit.
3. If using a carrier to transport two or more chemically incompatible or reactive materials that are not pre-packaged into kits, separate the incompatible items to reduce potential for mixing in the event of container leakage or breakage.



Hazardous Waste Materials

1. Containers with hazardous waste materials must be transported from their point of production to the chemical waste lock-up by Campus Services Staff using any of the carriers described above.
2. The choice of carrier must be made on the basis of the type of container holding the hazardous waste.

Markings on Carriers

1. Whenever a chemical container is transported inside of a tote or an enclosed carrier, the person responsible for transporting the material must ensure that a description of the non-visible contents is provided on the outside of the tote and or carrier.
2. Hand-written paper or cardboard temporary signs, affixed to the container with tape, are adequate, so long as they are legible and can be read at a distance of about 2 meters (e.g. write the contents in capital letters, using a dark magic marker on white paper or cardboard).