

12 MONTHS OF RESEARCH SAFETY

BONDING AND GROUNDING FLAMMABLE LIQUIDS

Transfer of flammable liquid from one container to another can cause a buildup of a static electricity. If there are no means to drain the static electricity buildup, there is a risk of generating a spark, which may ignite the flammable vapors in the area causing a fire or explosion. Bonding and grounding is an effective technique for minimizing this risk.

Dispensing flammable liquids from containers larger than 1 gallon (4 L) must be bonded and grounded in order to work safely.

Bonding and Grounding technique



Bonding and grounding for a metal receiving container



Bonding and grounding for non-metal receiving container

1. Grounding - Connect the dispensing vessel to the earth ground or a building static grounding system using a grounding cable.
2. Bonding -
 - a. For metal receiving containers - connect the bonding cable from the dispensing vessel to the receiving vessel directly, or via a metallic floorplate.
 - b. For non-metal receiving containers - use a metal grounding rod or wire inserted into the receiving container. Provide sufficient support for the grounding rod so that it does not cause the container to tip over. Connect the bonding cable from the dispensing vessel to the grounding rod directly.

General tips for safe solvent transfer

- Environment - Ensure spill containment, proper ventilation, and no ignition sources
- Control and tools - Pumps preferred. Use non-sparking tools.
- PPE - FR (**blue**) lab coats and splash **goggles**

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