

Loading and Unloading Procedures for AMBERLITE™ BD10DRY™ Resin

Loading Procedure

Safety Note: If the relative humidity is less than 60%, an explosion risk does exist due to a potential static discharge when loading fresh AMBERLITE BD10DRY resin into a vessel that previously contained biodiesel. To minimize any explosion risk it is recommended to rinse the vessel with biodiesel containing less than 2.5 weight % methanol prior to loading fresh AMBERLITE BD10DRY resin.

If the methanol concentration in the biodiesel is unknown, another possible approach is to use a portable flammable gas detector to determine that a flammable environment is **NOT** present in the vessel prior to loading the fresh AMBERLITE BD10DRY resin. One potential website for the purchase of a flammable gas detector is www.inspectortools.com.

1. Open the top of the vessel. Examine the vessel to make sure that the old resin and biodiesel have been removed.
2. Lift the drums to the top of the vessel and load the resin by dumping from the drums into the empty vessel. Make sure that the vessel is not loaded more than 1/3 full with AMBERLITE BD10DRY resin.

3. Close the top of the vessel. Introduce biodiesel (use purified biodiesel if available) from the bottom of the vessel until the resin is covered. Allow a minimum of one hour for the resin to swell in the biodiesel prior to starting the flow.
4. Start the flow of biodiesel from the top of the vessel at the specified flow rate (approximately 2 BV/h).

Unloading Procedure

1. Open the valve at the bottom of the vessel and allow the biodiesel to drain out of the bed of AMBERLITE BD10DRY resin.
2. If available, purge the resin bed with nitrogen or compressed air for one hour to remove additional biodiesel that may be in the resin bed.
3. Open the manhole and empty the used AMBERLITE BD10DRY resin into containers. If the resin will be disposed of these containers should be suitable for transporting.

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