



PPMS Service Note 1095-308

Initial Cool Down of the EverCool Dewar

Quantum Design has found that the gas-only method is inappropriate for the initial cool down¹ of the PPMS with EverCool dewar. Therefore, Quantum Design must recommend that owners of such systems use liquid helium for the cool down.

For the initial cool down of an Evercool dewar, you will need at least 60 liters of liquid helium and a standard cylinder (8200 liter) of helium gas. The level of liquid helium in the EverCool dewar must reach at least 50% during the cool down, but it should not exceed 65%. These levels of liquid helium (50–65%) will help prevent plugs in the condensing unit during the cool down.

Note that it is common for the liquid-helium level to drop 10% in the first 24 hours after you have filled the dewar. It is not necessary to add more helium, but you can if you prefer. For a more detailed explanation of the cooling process, please consult Section 2.2.3.1 in the *PPMS EverCool User's Manual*, then contact your local Quantum Design service representative.

¹ "Cool down" refers to the act of (and procedures for) filling an empty EverCool dewar with helium. Whenever the level of liquid helium in the EverCool dewar is less than 15%, you will need to let the system warm to room temperature and then refill it by using the cool-down procedures. When liquid-helium levels are at 15% and above, you can refill the dewar by transferring liquid helium (refer to Chapter 4 of the *PPMS EverCool User's Manual*).