



Underground Fuel Tanks Used Aboveground

Q: We have been asked to approve the installation of an underground flammable liquid storage tank in an aboveground fuel storage application. Are any underground tanks listed for this application, with or without a retrofit kit? Does installing an underground tank aboveground create any safety hazards?

A: UL does not List underground storage tanks for use in above ground fuel storage applications, or any retrofit kits for such an application. There are significant safety concerns to consider with the application you described that could lead to catastrophic failures.

Underground tanks are not required to have an emergency vent, which is required for all aboveground tanks to prevent pressure buildup if the tank is exposed to fire. Without properly sized and constructed emergency vents, during a fire exposure the tank could overheat, over-pressurize and rupture, with catastrophic consequences. Underground tanks are not required to have emergency venting because they are intended to be protected from fire exposure by backfill.

Underground tanks have been evaluated for structural integrity, anticipating evenly distributed support along their entire surface by backfill. The ability of underground tanks to maintain their shape and structural integrity when point loaded on aboveground supports

has not been investigated. Concerns with structural integrity would be heightened if the tank had previously been used underground.

UL Standards used to evaluate underground tanks are harmonized to applicable model installation codes, which also do not permit underground tanks to be installed in aboveground applications. UL Lists aboveground metallic tanks under UL the product category Aboveground Flammable Liquid Tanks (EEEEV). A suitably selected and installed aboveground tank should be used for the application you describe.