



Coffee Break Training - Fire Protection Series

Hazardous Materials: Hazardous Liquid Storage Tank Definitions

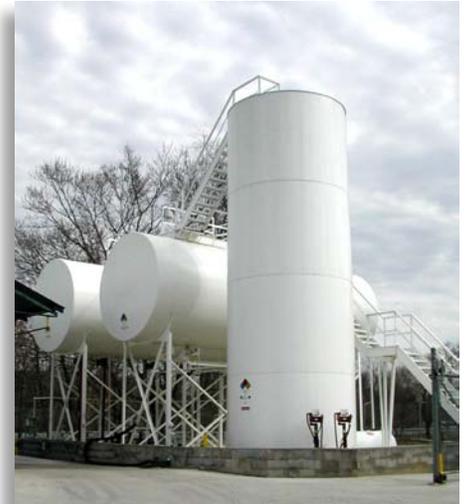
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Learning Objective: The student shall be able to define key terms associated with the design of hazardous liquid storage tanks.

Storage tanks for hazardous liquids are manufactured in a variety of configurations depending upon the needs of the client. The tank's design, characteristics, orientation, and installation may affect the fire protection requirements, so understanding these definitions is important to the code official for proper application of the safety regulations.

The following table summarizes some of the key working definitions:

Tank Type	Definition
Aboveground tank	A horizontal or vertical tank that is listed and intended for a fixed installation, above grade without backfill.
Atmospheric tank	A storage tank designed to operate at pressures from atmospheric through 1 pound per square inch gauge (psig) (760 through 812 mm Hg) measured at the top of the tank.
Portable tank	Any closed vessel having a liquid capacity more than 60 gallons (227 L) and not intended for fixed installation.
Pressure vessel	A closed vessel designed to operate at pressures more than 15 psig (103 kPa).
Storage tank	Any vessel having a liquid capacity more than 60 gallons that is intended for fixed installation and is not used for processing.
Storage tank, cone roofed	A tank with vertical sides and is equipped with a fixed cone-shape roof that is welded to the sides of the tank.
Storage tank, floating roof	A tank with vertical sides and is equipped with a pontoon-type roof that floats on the contents' surface.
Storage tank, internal floating roof/covered floating roof	A tank with vertical sides, equipped with a pontoon-type roof that floats on the contents' surface and has a fixed roof above it.
Tank, protected aboveground	A tank listed in accordance with Underwriters Laboratories (UL) 2085, <i>Protected Aboveground Tanks for Flammable and Combustible Liquids</i> , consisting of a primary tank protected from physical damage and fire-resistive protection from a high-intensity pool fire exposure.
Underground tank	A tank that has 10 percent or more of its volume below the surface of the ground in which it is installed.



These horizontal and vertical atmospheric tanks are just two of the many tank designs that exist for storing hazardous liquids.

For additional information, refer to *International Fire Code*, Chapters 27 and 34, and the National Fire Protection Association (NFPA) 1, *Uniform Fire Code*™ Chapter 60 and 66, and NFPA 30, *Flammable and Combustible Liquids Code*.



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