

**1513.0190 FILLING DENSITIES.**

Subpart 1. **Nonrefrigerated containers.** The maximum filling densities for nonrefrigerated containers are:

	Aboveground	Underground
(1) Uninsulated	56%*	58%
(2) Insulated	57%	
(3) DOT containers and cylinders shall be filled in accordance with DOT regulations.		

\* This corresponds to 82 percent by volume at minus 28 degrees Fahrenheit, 85 percent by volume at 5 degrees Fahrenheit, 87.5 percent by volume at 30 degrees Fahrenheit, and 90.6 percent by volume at 60 degrees Fahrenheit.

Subp. 2. **Refrigerated storage tanks.** The filling density for refrigerated storage tanks must be such that the tanks will not be liquid full at a liquid temperature corresponding to the vapor pressure at the start to discharge pressure setting of the pressure relief valve.

Subp. 3. **Required thermometers and wells.** If containers are to be filled according to liquid level by any gauging method other than a fixed length dip tube gauge, each container must have a thermometer well and thermometer so that the internal liquid temperature can be easily determined and the amount of liquid and vapor in the container corrected to a 60 degrees Fahrenheit basis.

**Statutory Authority:** *MS s 18C.121*

**History:** *21 SR 277*

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