**ASAE S281.3 APR1987 (R2018)**
**Capacity Designation for Fertilizer and Pesticide Hoppers and Containers**

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# Capacity Designation for Fertilizer and Pesticide Hoppers and Containers

*Proposed by the Fertilizer Application Subcommittee of the ASAE Chemical Application Committee December 1962; approved by the ASAE Power and Machinery Division Technical Committee; adopted by ASAE December 1964; revised December 1967; reconfirmed December 1972; revised March 1976; reconfirmed December 1980, December 1985; revised April 1987; reconfirmed December 1991; reaffirmed December 1996, December 1998, February 2004, February 2009; reaffirmed November 2013; reaffirmed October 2018.*

**Keywords:** Capacity, Fertilizer, Hoppers, Labeling, Pesticide

## 1 Purpose and Scope

**1.1** This Standard is intended to provide a uniform method for calculating and expressing the capacity of fertilizer and pesticide hoppers and containers.

## 2 Dry Hoppers

**2.1** Hoppers for dry materials shall be rated volumetrically and gravimetrically, both based on the inside measurements of the hopper, struck level, with the level low enough to permit normal closing of covers.

**2.2** The volumetric rating shall be expressed in cubic meters (cubic feet).

**2.3** The gravimetric rating shall be expressed in kilograms (pounds). The gravimetric rating shall be calculated by multiplying the volumetric rating by the nominal bulk density of materials for which the hopper is designed. A bulk density value of 1000 kg/m$^3$ (62 lb/ft$^3$) shall be used in rating all general-purpose dry fertilizer hoppers and 700 kg/m$^3$ (43 lb/ft$^3$) for granular pesticide hoppers.

## 3 Liquid and Fertilizer Containers

**3.1** Liquid fertilizer containers (tanks or hoppers) shall be rated volumetrically and gravimetrically.

**3.2** The volumetric rating shall be expressed in liters (U.S. gallons), measured with the container in the same position as occupied during filling by the user.

**3.3** The gravimetric rating shall be expressed in kilograms (pounds). The gravimetric rating shall be calculated by multiplying the volumetric rating by the nominal density of the fertilizers for which the container is designed. A density value of 1.2 kg/L (10 lb/U.S. gal) shall be used in rating all general-purpose, liquid fertilizer containers.

## 4 Liquid Pesticide Tanks

**4.1** Liquid pesticide tanks need to be rated volumetrically only.



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