

§ 30.63

27 CFR Ch. I (4-1-04 Edition)

Under the true percent of proof and on the same horizontal line with the weight will be found the wine gallons (at 60 degrees Fahrenheit) and the proof gallons respectively. Where either the weight or the proof of a quantity of spirits is beyond the limitations of this table, the number of proof gallons may be ascertained by reference to Table 3. This table may also be used to ascertain the wine gallons (at 60 degrees Fahrenheit) and proof gallons of spirituous liquor containing dissolved solids where the weight, apparent proof (hydrometer indication corrected to 60 degrees Fahrenheit), and obscuration factor have been determined.

Example. 334 lbs. of distilled spirits.
 Apparent proof—96.0°.
 Obscuration—0.8°.
 True Proof 96.0°+0.8°=96.8°.
 334 lbs. at 96.0° apparent proof=42.8 wine gallons.
 42.8 wine gallons×96.8°=41.4 proof gallons.

In addition this table may be used to obtain the wine gallons, at the prevailing temperature, of most liquids within the range of the table, from the weight of the liquid and the uncorrected reading of the hydrometer stem. An application of this would be in determining the capacity of a package.

Example. It is desired to determine, or to check the rated capacity of a package having a net weight of 395 pounds when completely filled with spirits having an uncorrected hydrometer reading of 113.0°. The full capacity of the package, 51.5 wine gallons, would be found by referring to the table at 395 pounds and 113° proof (hydrometer reading).

(Sec. 201, Pub. L. 85-859, 72 Stat. 1358, as amended, 1362, as amended (26 U.S.C. 5204, 5211))

§ 30.63 Table 3, for determining the number of proof gallons from the weight and proof of spirituous liquor.

When the weight or proof of a quantity of distilled spirits is not found in Table 2, the proof gallons may be ascertained from Table 3. The wine gallons (at 60 degrees Fahrenheit) may be ascertained by dividing the proof gallons by the proof.

Example. A tank car of spirits of 190 degrees of proof weighed 60,378 pounds net. We find—

	Proof gallons
60,000 pounds equal to	16,778.4
300 pounds equal to	83.9

	Proof gallons
70 pounds equal to	19.6
8 pounds equal to	2.2
Total	16,884.1

That is, the total weight of 60,378 pounds of spirits at 190 proof is equal to 16,884.1 proof gallons. The equivalent gallonage for 70 pounds is found from the column 700 pounds by moving the decimal point one place to the left; that for 8 pounds from the column 800 pounds by moving the decimal point two places to the left.

Example. A package of spirits at 86 proof weighed 321½ pounds net. We find—

	Proof gallons
300 pounds equal to	32.7
20 pounds equal to	2.2
1 pound equal to1
½ pound equal to1
Total	35.1

That is, 321½ pounds of spirits at 86 proof is equal to 35.1 proof gallons. The equivalent gallonage for 20 pounds is found from the column 200 pounds by moving the decimal point one place to the left; that for 1 pound from the column 100 pounds by moving the decimal point two places to the left; that for the ½ pound from the column 500 pounds by moving the decimal point three places to the left.

Fractional gallons beyond the first decimal ascertained through use of this table will be dropped if less than 0.05 or will be added as 0.1 if 0.05 or more. The wine gallons (at 60 degrees Fahrenheit) may be determined by dividing the proof gallons by the proof. For example: 35.1 divided by 0.86 equals 40.8 wine gallons.

(Sec. 201, Pub. L. 85-859, 72 Stat. 1358, as amended (26 U.S.C.5204))

§ 30.64 Table 4, showing the fractional part of a gallon per pound at each percent and each tenth percent of proof of spirituous liquor.

This table provides a method for use in ascertaining the wine gallon (at 60 degrees Fahrenheit) and/or proof gallon contents of containers of spirits by multiplying the net weight of the spirits by the fractional part of a gallon per pound shown in the table for spirits of the same proof. Fractional gallons beyond the first decimal will be

dropped if less than 0.05 or will be added as 0.1 if 0.05 or more.

Example. It is desired to ascertain the wine gallons and proof gallons of a tank of 190 proof spirits weighing 81,000 pounds.

81,000×0.14718=11,921.58=11,921.6 wine gallons.
81,000×0.27964=22,650.84=22,650.8 proof gallons.

This table may also be used for ascertaining the quantity of water required to reduce to a given proof. To do this, divide the proof gallons of spirits to be reduced by the fractional part of a proof gallon per pound of spirits at the proof to which the spirits are to be reduced, and subtract from the quotient the net weight of the spirits before reduction. The remainder will be the pounds of water needed to reduce the spirits to the desired proof.

Example. It is desired to ascertain the quantity of water needed to reduce 1,000 pounds of 200 proof spirits, 302.58 proof gallons, to 190 proof:

302.58 divided by 0.27964 equals 1,082.03 pounds, weight of spirits after reduction.
1,082.03 minus 1,000 equals 82.03 pounds, weight of water required to reduce to desired proof.

The slight variation between this table and Tables 2, 3, and 5 on some calculations is due to the dropping or adding of fractions beyond the first decimal in those tables. This table may also be used to determine the wine gallons (at 60 degrees Fahrenheit) of distilled spirits containing dissolved solids from the total weight of the liquid and its apparent proof (hydrometer indication, corrected to 60 degrees Fahrenheit). The proof gallons may then be found by multiplying the wine gallons by the true proof.

Example. 5,350 pounds of blended whisky containing added solids

Temperature °F.....75.0°
Hydrometer reading.....92.0°
Apparent proof.....85.5°
Obscuration.....0.5°
True proof.....86.0°
5,350.0 lbs.×0.12676 (W.G. per pound factor for apparent proof of 85.5°)=678.2 wine gallons
678.2 W.G.×0.86=583.3 proof gallons

(Sec. 201, Pub. L. 85-859, 72 Stat. 1358, as amended 1362, as amended (26 U.S.C. 5204, 5211))

§ 30.65 Table 5, showing the weight per wine gallon (at 60 degrees Fahrenheit) and proof gallon at each percent of proof of spirituous liquor.

This table may be used to ascertain the weight of any given number of wine gallons (at 60 degrees Fahrenheit) or proof gallons of spirits by multiplying the pounds per gallon by the given number of gallons of the spirits. The table should be especially useful where it is desired to weigh a precise quantity of spirits.

Example. It is desired to ascertain the weight of 100 wine gallons of 190 proof spirits:
6.79434×100 equals 679.43 pounds, net weight of 100 wine gallons of 190 proofs spirits.

Example. It is desired to ascertain the weight of 100 proof gallons of 190 proof spirits.

3.57597×100 equals 357.60 pounds, net weight of 100 proof gallons of 190 proof spirits.

The slight variation between this table and Tables 2 and 3 on some calculations is due to dropping or adding of fractions beyond the first decimal on those tables. This table also shows the weight per wine gallon (at the prevailing temperature) corresponding to each uncorrected reading of a proof hydrometer.

(Sec. 201, Pub. L. 85-859, 72 Stat. 1358, as amended (26 U.S.C. 5204))

§ 30.66 Table 6, showing respective volumes of alcohol and water and the specific gravity in both air and vacuum of spirituous liquor.

This table provides an alternate method for use in ascertaining the quantity of water needed to reduce the strength of distilled spirits by a definite amount. To do this, divide the alcohol in the given strength by the alcohol in the required strength, multiply the quotient by the water in the required strength, and subtract the water in the given strength from the product. The remainder is the number of gallons of water to be added to 100 gallons of spirits of the given strength to produce a spirit of a required strength.

Example. It is desired to reduce spirits of 191 proof to 188 proof. We find that 191 proof spirits contains 95.5 parts alcohol and 5.59 parts water, and 188 proof spirits contains 94.0 parts alcohol and 7.36 parts water.