

# Container Volume



## Fact Sheet



Some examples of what you might have...

### Dumpsters (in cubic yards)

8      6      4      2



### Roll-carts (in gallons)

95      65



### 35 gallon recycling container



### 18 gallon recycling bin



### 55 gallon drum (with lid)



### Roll-off Dumpsters (in cubic yards)

15      20      30      40



### Typical Trash Bag Volume:

Small bags:	Large bags:
4 gallon (bathroom)	30 gallon
8 gallon (bathroom)	33 gallon
13 gallon (kitchen)	39 gallon
	45 gallon

Remember to confirm container volume with your facilities manager or janitorial staff!



# Volume to Weight Fact Sheet

How many pounds of recyclable materials  
do you have?

Find out with the help of this volume to  
weight fact sheet!

## Important Terminology for this Fact Sheet:

Cans = Aluminum Cans

Bottles = Plastic Bottles (ex: water bottles, soda bottles, etc.)

Cardboard = Corrugated Cardboard

Steel Cans = large soup cans from cafeteria

Commingled = a mix of recyclable materials

Mixed paper = office paper, junk mail, cardboard, newspaper, magazines

Pounds = lbs

Cubic Yard = cu yd = yd<sup>3</sup>

Gallon = gal

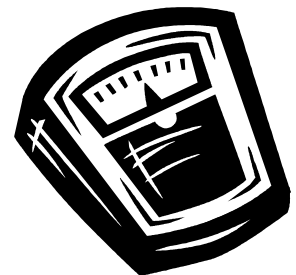
## Helpful Volume Conversions:

1 cu yd = 201.974 gal

1 gal = 0.00576 cu yd

### Please note:

- We are asking everyone who will be converting volume to weight to use similar calculations so we can compare apples to apples.
- The weights provided are for uncrushed cans, bottles & steel cans and loose paper.



Please go to the next page for commingled & single material conversions.

# Volume to Weight Fact Sheet



**If your material is commingled:**

Commingled Materials	Pounds per Gallon	Pounds per Cubic Yard
cans, bottles & mixed paper	1.73	300.35
cans, bottles, steel cans, glass & mixed paper	1.02	177.32
cans, bottles, steel cans & mixed paper	1.18	204.76
cans, bottles & glass	0.35	61.55
cans, bottles, steel cans & glass	0.32	55.80
cans, bottles & steel cans	0.18	31.35
cans & bottles	0.16	27.22

**If your material is source separated:**

Single Material	Pounds per Gallon	Pounds per Cubic Yard
paper (office/printer paper)	2.80	371.53
Cardboard	1.16	200.93
mixed paper	0.97	342.49
steel cans	0.74	128.47
aluminum cans	0.15	39.93
plastic bottles	0.12	26.08

Material	Pounds for 1 Item
aluminum can	0.03
plastic bottle	0.04
steel can	0.09
glass bottle	0.44

**Please go to the next page for sample calculations.**

# Volume to Weight Fact Sheet



Continued...



## Sample Calculations

1- Your school emptied 5, 35-gallon bins full of paper during the competition. What is the estimated weight of the material?

Using the Recycle-Bowl conversions there is 2.80 lbs/gal, you will have **490 lbs**.

How did we get 490 lbs?

$$\frac{?? \text{ lbs}}{35 \text{ gal}} = \frac{2.80 \text{ lbs}}{1 \text{ gal}}$$

Cross multiply, and you get ?? lbs = 98 lbs. But you have 5, 35 gallon bins. Therefore you have 5 x 98 lbs = **490 lbs**.

2- Your school emptied 3, 18-gallon bins full of cans & bottles you weighed one bin you weighed one bin and it was 2.7 lbs. What is the estimated weight of the material?

Then extrapolating the data, you will have **8.1 lbs**.

How did we get 8.1 lbs?

We simply multiply 2.7 by 3, which equals **8.1 lbs**.

3- You and your students are counting the number of cans & bottles you have collected in your classroom recycling bin. You have recorded 65 cans and 80 bottles. What is the total weight in pounds?

Using the Recycle-Bowl conversions 1 can is 0.03 lbs and 1 bottle is 0.04 lbs, you have a total of **5.15 lbs** recyclable material.

How did we get 5.15 lbs of recyclable material?

1 can = 0.03 lbs, so 65 cans x 0.03 lbs = 1.95 lbs of cans; 1 bottle = 0.04 lbs, so 80 bottles x 0.04 lbs = 3.2 lbs of bottles

1.95 lbs + 3.2 lbs = **5.15 lbs** of recycled material.

4- Your school has an 8 yd<sup>3</sup> dumpster for paper. It was full the first and second week and half full the third and subsequent final week. It was emptied each week. What is the total weight in pounds?

Using the Recycle-Bowl conversions there is 342.49 lbs/yd<sup>3</sup>, you will have **8219.76 lbs** of recycled paper.

How did we get 8219.76 lbs?

You have an 8 yd<sup>3</sup> dumpster, so:

$$\frac{342.49 \text{ lbs}}{1 \text{ yd}^3} = \frac{??? \text{ lbs}}{8 \text{ yd}^3}$$

Cross multiply, and you get ??? lbs = 2739.92 lbs. The 8 yd<sup>3</sup> was full for two weeks so multiply, 2739.92 x 2 = 5479.92 lbs.

Next, the 8 yd<sup>3</sup> is half full, so 4 yd<sup>3</sup>:

$$\frac{342.49 \text{ lbs}}{1 \text{ yd}^3} = \frac{??? \text{ lbs}}{4 \text{ yd}^3}$$

Cross multiply, and you get ??? lbs = 1369.96 lbs. Since the dumpster was half full for 2 weeks, multiply 1369.96 x 2 = 2739.92 lbs.

To get your total add: 5479.92 + 2739.92 = **8219.76 lbs** of recycled paper.