



PDHonline Course C318 (8 PDH)

Reducing Solid Waste

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Appendix D

Volume-to-Weight Conversion Table

The volume-to-weight conversion table presented on the following pages is a compilation of several sources. Materials converted from volume to weight include paper (high-grade and other), glass, plastic, metals, organics, and other materials (e.g., tires and oil).

It is important to note that although the weight (density) figures presented here are useful for determining rough estimates, they will not be as useful when precise measurements are required. Differences in the way a material is handled, processed, or in the amount of moisture present can make substantial differences in the amount a particular material weighs per specified volume. Because of these differences, it will be important to actually sort and weigh materials in your program whenever precise measurements are needed (e.g., recycling contract agreements).

Category	Material (u/c = uncompactd/ compactd & baled)	Volume	Estimated Weight (in pounds)
High-Grade Paper	<i>Computer Paper:</i>		
	Uncompactd, stackd	1 cu. yd.	655
	Compactd/bald	1 cu. yd.	1,310
	1 case	2800 sheets	42
	<i>White Ledger:</i>		
	(u)stackd/(c)stackd	1 cu. yd.	375465/755-925
	(u)crumpld/(c)crumpld	1 cu. yd.	11 0205/325
	Ream of 20# bond; 8-1/2 x 11	1 ream = 500 sheets	5
	Ream of 20# bond; 8-1/2 x 14	1 ream= 500 sheets	6.4
	White ledger pads	1 case= 72 pads	38
	<i>Tab Cards:</i>		
	Uncompactd	1 cu. yd.	605
	Compactd/bald	1 cu. yd.	1,215-1,350

Category	Material (u/c = uncompacted/ compacted & baled)	Volume	Estimated Weight (in pounds)
Other Paper	Cardboard (Corrugated):		
	Uncompacted	1 cu. yd.	50-150
	Compacted	1 cu. yd.	300-500
	Baled	1 cu. yd.	7001,100
	Newspaper:		
	Uncompactad	1 cu. yd.	360-505
	Compacted/baled	1 cu. yd.	7201,000
	12" stack	—	35
	Miscellaneous Paper:		
	Yellow legal pads	1case=72pads	38
	Colored message pads	1 carton= 144 pads	22
	Self-carbon forms; 8-1/2 x 11	1 ream= 500 sheets	50
	Mixed Ledger/Office Paper:		
	Flat (u/c)	1 cu. yd.	380/755
	Crumpled (u/c)	1 cu. yd.	110205/610
G ass	Refillable Whole Bottles:		
	Refillable beer bottles	1 case= 24 bottles	14
	Refillable soft drink bottles	1 case= 24 bottles	22
	8 oz. glass container	1 case= 24 bottles	12
	Bottles:		
	Whole	1 cu. yd	500-700
	Semi-crushed	1 cu. yd.	1,0001,800
	Crushed (mechanically)	1 cu. yd.	1,800-2,700
	Uncrushed to manually broken	55gallon drum	300

Category	Material (u/c = uncompacted/ compacted & baled)	Volume	Estimated weight (in pounds)
Plastic	PET (Soda Bottles):		
	Whole bottles, uncompacted	1 cu. yd.	30-40
	Whole bottles, compacted	1 cu. yd.	515
	Whole bottles, uncompacted	gaylord	40-53
	Baled	30" x 62"	500-550
	Granulated	gaylord	700-750
	8 bottles (2-liter size)		1
	HDPE(Dairy):		
	Whole, uncompacted	1 cu. yd.	24
	Whole, compacted	1 cu. yd.	270
	Baled	32" x 60"	400-500
	HDPE(Mixed):		
	Baled	32" x 60"	900
	Granulated	semi-load	42,000
	Odd Plastic:		
	Uncompacted	1 cu. yd.	50
	Compacted/baled	1 cu. yd.	400-700
	Mixed PET and HDPE (Dairy):		
	Whole, uncompacted	1 cu. yd.	32
	Metals	Aluminum (Cans):	
Whole		1 cu. yd.	50-75
Compacted (manually)		1 cu. yd.	250-430
Uncompacted		1 full grocery bag 1 case= 24 cans	1.5 0.9
Ferrous (tin-coated steel cans):			
Whole		1 cu. yd.	150
Flattened		1 cu. yd.	850
Whole		1 case= 6 cans	22

Category	M a t e r i a l (u/o = uncompacted/ Compacted & baled)	V o l u m e	Estimated weight (in pounds)
Organics	<i>Yard trmning*:</i>		
	Leaves (uncompacted)	1 cu. yd.	200-250
	Leaves (compacted)	1 cu. yd.	300-450
	Leaves, vacuumed	1 cu. yd.	350
	Grass clippings (uncompacted)	1 cu. yd.	350-450
	Grass clippings (compacted)	1 cu. yd.	550-1,500
	Finished compost	1 cu. yd.	600
	Scrap wood:		
	Pallets		30-100 (40 avg.)
	Wood chips	1 cu. yd.	500
	<i>Food Waste:</i>		
	Solid/liquid fats	55-gallon drum	400-410
	Other Materials	<i>Tires:</i>	
Car		1 tire	12-20
Truck		1 tire	60-100
<i>Oil (Used Motor Oil)</i>		1 gallon	7

*Density of yard trimmings is highly variable depending on moisture content.

Conversion Table Sources

Brown University Summer Internship Program, *Guide for Preparing Commercial Solid Waste Reduction and Recycling Plans*, prepared for Ocean State Cleanup and Recycling (OS-CAR), Providence, Rhode Island, 1988.

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Conversion factors are adapted from information in: "Recycling is Everybody's Business", Morris County Municipal Utilities Authority, April 1989 and "Recycling Manual: Oneida and Herkimer Counties Solid Waste Management Project", William F. Cosulich Associates, 1988.