

Reference Information

Ingredient Bulk Density Table



Ingredient	Bulk Density (lb/cu.ft.)		Ingredient	Bulk Density (lb/cu.ft.)	
	Loose	Packed		Loose	Packed
Adipic Acid		45	Barley, fine, ground	24	38
Alfalfa Meal	14	22	Barley, malted		31
Alfalfa Pellets	41	43	Barley, meal		28
Alfalfa Seed	10	15	Barley, whole	36	48
Almonds broken	27	30	Basalt	80	105
Almonds whole shelled	28	30	Bauzite, dry, ground		68
Alum fine	45	50	Bauzite, crushed - 3"	75	85
Alum lumpy	50	60	Beans, castor, meal	35	40
Alumina	55	65	Beans, castor, whole, shelled		36
Alumina fines		35	Beans, navy, dry		48
Alumina sized or briquette		65	Beans, navy, steeped		60
Aluminate gel		45	Bentonite, crude	34	40
Aluminate hydroxide			Bentonite, 100-mesh	50	60
Aluminum chips, oily	7	15	Benzene hexachloride		56
Aluminum hydrate	13	20	Bicarbonate of soda (see baking soda)		
Aluminum ore (see bauxite)			Blood, dried	35	45
Aluminum Oxide	60	120	Blood, ground, dried		30
Aluminum Silicate (andalusite)		49	Bone ash (tricalcium phosphate)	40	50
Aluminum Sulfate	45	58	Boneblack	20	25
Ammonium Chloride, crystalline	45	52	Bonchar	27	40
Ammonium nitrate	45	62	Bonemeal	50	60
Ammonium sulfate	45	58	Bones, whole	35	50
Antimony Powder			Bones, crushed	35	50
Apple pomace, dry		15	Bones, ground		50
Arsenate of lead (see lead arsenate)			Borate of lime		60
Arsenic oxide (arsenolite)	100	120	Borax, fine	45	55
Arsenic pulverized		30	Borax, screening 1/2"	55	60
Asbestos rock (ore)		81	Borax, 1/2-2", lump	55	60
Asbestos shredded	20	40	Borax, 2-3", lump	60	70
Ash, black ground		105	Boric acid, fine		55
Ashes, coal, dry 1/2"	35	45	Boron		75
Ashes, coal, dry 3"	35	40	Bran (rice-rye-wheat)	16	20
Ashes, coal, wet 3"	45	50	Braunite (manganese oxide)		120
Ashes, fly (see fly ash)			Bread crumbs	20	25
Asphalt, crushed 1/2"		45	Brewer's grain, spend, dry	14	30
Bagasse	7	10	Brewer's grain, spent, wet	55	60
Bakelite, fine	30	45	Brick, ground, 1/8"	100	120
Baking powder	40	55	Bronze chips	30	50
Baking soda (sodium bicarbonate)	40	55	Buckwheat	42	47
Barite (barium sulfate) +1/2-3"	120	180	Calcine, flour	75	85
Barite powder	120	180	Calcium carbide	70	90
Barium carbonate		72	Calcium carbonate (see limestone)		
Bark, wood, refuse	10	20			

Ingredient Bulk Density Table

Ingredient	Bulk Density (lb/cu.ft.)		Ingredient	Bulk Density (lb/cu.ft.)	
	Loose	Packed		Loose	Packed
Calcium fluoride (see fluorspar)			Coal, bituminous, mined, sized	45	50
Calcium hydrate (see lime, hydrated)			Coal, bituminous, mined, slack	43	50
Calcium hydroxide (see lime, hydrated)			Coal, lignite	37	45
Calcium lactate	26	29	Cocoa beans	30	45
Calcium oxide (see lime, unslaked)			Cocoa nibs		35
Calcium phosphate	40	50	Cocoa, powdered	30	35
Calcium sulphate (see gypsum)			Cocoanut, shredded	20	22
Carbon, activated, dry, fine			Coffee, chaff		20
Carbon black, pelleted			Coffee, green bean	25	32
Carbon black, powder			Coffee, ground, dry		25
Carborundum		100	Coffee, ground, wet	35	45
Casein		36	Coffee, roasted bean	20	30
Cashew nuts	32	37	Coffee, soluble		19
Cast iron chips	180	200	Coke, breeze	25	35
Caustic soda		88	Coke, loose	23	35
Caustic soda, flakes		47	Coke, petrol, calcined	35	45
Celite (see diatoma- ceous earth)			Compost	30	50
Cement, clinker	75	95	Concrete, pre-mix, dry	85	120
Cement, motar		133	Copper ore	120	150
Cement, portland		94	Copper ore, crushed	100	150
Cement, aerated, portland	60	75	Copper sulfate (bluestone)	75	95
Cerrusite (see lead carbonate)			Copperas (see ferrous sulphate)		
Chalk, crushed	75	95	Copra, cake ground	40	45
Chalk, pulverized	67	75	Copra, cake lumpy	25	30
Charcoal, ground	18	38	Copra, lumpy		22
Charcoal, lumps	18	28	Copra, meal	40	45
Chocolate, cake, pressed	40	45	Cork, fine ground	5	15
Chrome ore	125	140	Cork, granulated	12	15
Cinders, blast furnace		57	Corn, cracked	40	50
Cinders, coal		40	Corn cobs, ground		17
Clay (see bentonite, diatomaceous earth) (also Fuller's earth, Kaolin, marl)			Corn cobs, whole	12	15
Clay, ceramic, dry, fines	60	80	Corn, ear		56
Clay, calcined	80	100	Corn, germ		21
Clay, brick, dry, fines	100	120	Corn grits	40	45
Clay, dry, lumpy	60	75	Corn meal	32	40
Clinker, cement (see cement, clinker)			Corn oil, cake		25
Clover seed	45	48	Corn seed		45
Coal, anthracite, (river & calm)	55	61	Corn shelled		45
Coal, anthracite, sized, 1/2"	49	61	Corn sugar	30	35
Coal, bituminous, mined	40	60	Cottonseed, cake, crushed	40	45
			Cottonseed, cake, lumpy	40	45
			Cottonseed, dry, delinted	22	40
			Cottonseed, dry, not delinted	18	25
			Cottonseed, flakes	20	25
			Cottonseed, hulls		12
			Cottonseed, meal, expeller	25	30
			Cottonseed, meal, extracted	35	40

Ingredient Bulk Density Table

Ingredient	Bulk Density (lb/cu.ft.)		Ingredient	Bulk Density (lb/cu.ft.)	
	Loose	Packed		Loose	Packed
Cottonseed, meats, dry		40	Gelatine, granulated		32
Cottonseed, meats, rolled	35	40	Gilsonite		37
Cracklings, crushed	40	50	Glass, batch	80	100
Cryolite, dust	75	90	Glue, ground		40
Cryolite, lumpy	90	110	Glue, pearl		40
Cullet, fine	80	120	Glue, veg. powdered		40
Cullet, lumpy	80	120	Gluten, meal		40
Culm (see coal, anthracite)	80	120	Granite, fine	80	90
Cupric sulphate (see copper sulphate)			Grape pomace	15	20
Detergent (see soap detergent)			Graphite flake		40
Diatomaceous earth	11	17	Graphite flour		28
Dicalcium phosphate	40	50	Graphite ore	65	75
Disodium phosphate	25	31	Guano, dry		70
Distiller's grain, spent, dry		30	Gypsum, calcined	55	60
Distiller's grain, wet	40	60	Gypsum, calcined, powdered	60	80
Dolomite, crushed	80	100	Gypsum, raw - 1"	70	80
Dolomite, lumpy	90	100	Hay, chopped	8	12
Earth, loam, dry, loose		76	Hexanedioic acid (see adipic acid)		
Ebonite, crushed	63	70	Hominy, dry	35	50
Egg powder		16	Hops, spent, dry		35
Epsom salts (magnesium sulphate)	40	50	Hops, spent, wet	50	55
Feldspar, ground	65	80	Ice, crushed	35	45
Feldspar, lumps	90	100	Ice, flaked	40	45
Feldspar, powder		100	Ice, cubes	33	35
Feldspar, screenings	75	80	Ice, shell	33	35
Ferrous sulphide 1/2"	120	135	Ilmenite ore	140	160
Ferrous sulphide 100M	105	120	Iron ore concentrate	120	180
Ferrous sulphate	50	75	Iron oxide pigment		25
Fish meal	35	40	Iron oxide millscale		75
Fish scrap	40	50	Iron pyrites (see ferrous sulfide)		
Flaxseed	43	45	Iron Sulphate (see ferrous sulfate)		
Flaxseed cake (linseed cake)	48	50	Iron Sulfide (see ferrous sulfide)		
Flaxseed meal (linseed meal)	25	45	Iron vitriol (see ferrous sulfate)		
Flour wheat	33	40	Kafir (corn)	40	45
Flue dust, basic oxygen furnace	45	60	Kaolin clay		63
Flue dust, blast furnace	110	125	Kaolin clay-talc	42	56
Flue dust, boiler H. dry	30	45	Kryalith (see cryolite)		
Fluorspar, fine (calcium fluoride)	80	100	Lactose		32
Fluorspar, lumps	90	110	Lamp black (see carbon black)		
Flyash	30	45	Lead arsenate		72
Foundry sand, dry (see sand)			Lead arsenite		72
Fuller's earth, dry, raw	30	40	Lead carbonate	240	260
Fuller's earth, oily spent	60	65	Lead ore - 1/8"	200	270
Fuller's earth, calcined		40	Lead ore - 1/2"	180	230
Galena (see lead sulfide)			Lead oxide (red lead) 100 mesh	30	150
			Lead oxide (red lead) 200 mesh	30	180
			Lead sulfide - 100 mesh	240	260
			Lignite (see coal lignite)		
			Limanite, ore, brown		120

Ingredient Bulk Density Table

Ingredient	Bulk Density (lb/cu.ft.)		Ingredient	Bulk Density (lb/cu.ft.)	
	Loose	Packed		Loose	Packed
Lime, ground, unslaked	60	65	Oleo margarine		59
Lime, hhydrated		40	Orange peel, dry		15
Lime, hhydrated, pulverized	32	40	Oxalic acid crystals, ethane diacid crystals		60
Lime, pebble	53	56	Oyster shells, ground	50	60
Limestone, agricultural		68	Oyster shells, whole	80	80
Limestone, crushed	85	90	Paper pulp(4% or less)		62
Limestone, dust	55	95	Paper pulp (6% to 15%)	60	62
Lindane (see benzene hexachloride)			Paraffin cake - 1/2"		45
Linseed (see flaxseed)			Peanuts, clean in shell	15	20
Litharge (see lead oxide)			Peanut meal		30
Lithopone	45	50	Peanuts, raw, uncleaned unshelled	15	20
Maize (see milo)			Peanuts, shelled	35	45
Malt, dry, ground	20	30	Peas, dried	45	50
Malt, meal	36	40	Perlite, expanded	8	12
Malt, dry, whole	20	30	Phosphate acid fertilizer		60
Malt, sprouts	13	15	Phosphate disodium (see sodium phosphate)		
Magnesium chloride (magnesite)		33	Phosphate rock, broken	75	85
Manganese dioxide	70	85	Phosphate rock, pulverized		60
Manganese ore	125	140	Phosphate sand	90	100
Manganese oxide		120	Plaster of paris (see gypsum)		
Manganese sulfate		70	Plumbago (see graphite)		
Marble, crushed	80	95	Polystyrene beads		40
Marl, clay		80	Polyvinyl, chloride powder	20	30
Meat, ground	50	55	Polyvinyl, chloride pellets	20	30
Meat, scrap (w/bone)		40	Polyethylene resin pellets	30	35
Mica, flakes	17	22	Potash (muriate) dry		70
Mica, ground	13	15	Potash (muriate) mine rum		75
Mica, pulverized	13	15	Potassium carbonate		51
Milk, dried, flake	5	6	Potassium chloride pellets	120	130
Milk, malted	27	30	Potassium nitrate, 1/2"		76
Milk, powdered	20	45	Potassium nitrate, 1/8"		80
Milk, sugar		32	Potassium sulfate	42	48
Milk, whole powdered	20	36	Potato flour		48
Mill scale (steel)	120	125	Pumice, 1/8"	42	48
Milo, ground	32	36	Pyrite pellets	120	130
Milo, maize (kafir)	40	45	Quartz, 100-mesh	70	80
Molybdenite powder		107	Quartz, 1/2"	80	90
Monosodium phosphate		50	Rice, bran		20
Mortar, wet		150	Rice, grits	42	45
Mustard seed		45	Rice, polished		30
Naphthalene flakes		45	Rice, hulled	45	49
Niacin (nicotinic acid)		35	Rice, hulls	20	21
Oats		26	Rice, rough	32	36
Oats, crimped	19	26	Rosin, 1/2"	65	68
Oats, crushed		22	Rubber, reclaimed, ground	23	50
Oats, flour		35	Rubber, pelleted	50	55
Oat hulls	8	12	Rye	42	48
Oats, rolled	19	24			

Ingredient Bulk Density Table

Ingredient	Bulk Density (lb/cu.ft.)		Ingredient	Bulk Density (lb/cu.ft.)	
	Loose	Packed		Loose	Packed
Rye bran	15	20	Sodium bentonite (see bentonite)		
Rye feed		33	Sodium bicarbonate (see baking soda)		
Rye meal	35	40	Sodium chloride (see salt)		
Rye middlings		42	Sodium carbonate (see soda ash)		
Rye, shorts	32	33	Sodium hydrate (see caustic soda)		
Safflower, cake		50	Sodium hydroxide (see caustic soda)		
Safflower, meal		50	Sodium borate (see borax)		
Safflower, seed		45	Sodium nitrate	70	80
Saffron (see safflower)			Sodium phosphate	50	60
Sal ammoniac (see ammonium chloride)			Sodium sulfate (see salt cake)		
Salt, cake, dry coarse		85	Sodium sulfite		96
Salt, cake, dry pulverized	65	85	Sorghum, seed (see kafir or milo)		
Salicylic acid		29	Soybean, cake	40	43
Salt, dry coarse	45	60	Soybean, cracked	30	40
Salt, dry, fine	70	80	Soybean, flake, raw	18	25
Salt peter (see potassium nitrate)			Soybean, flour	27	30
Sand, dry, bank (damp)	110	130	Soybean meal, cold		40
Sand, dry, bank (dry)	90	110	Soybean meal, hot		40
Sand, dry, silica	90	100	Soybean whole	45	50
Sand, foundry (shake out)	90	100	Starch	25	50
Sand (resin-coated) silica		104	Steel turnings, crushed	100	150
Sand (resin-coated) zircon		115	Sugar beet, pulp, dry	12	15
Sawdust, dry	10	13	Sugar beet, pulp, wet	25	45
Sea-coal		65	Sugar, refined, granulated, dry	50	55
Sesame seed	27	41	Sugar, refined, granulated, wet	55	65
Shale, crushed	85	90	Sugar, powdered	50	60
Shellac, powdered or granulated		31	Sugar, raw	55	65
Silicon dioxide (see quartz)			Sugar, crushed - 1/2"	50	60
Silica, flour		80	Sulphur, lumpy, 3"	80	85
Silica gel 1/2-3"		45	Sulphur, powdered	50	60
Slag, blast furnace crushed	130	180	Sunflower seed	19	38
Slag, furnace, granular, dry	60	65	Talcum, 1/2"	80	90
Slate, crushed, 1/2"	80	90	Talcum powder	50	60
Slate, ground 1/8"	82	85	Tanbark, ground		55
Sludge, sewage, dried	40	50	Timothy seed		36
Sludge, sewage, dry ground	45	55	Titanium dioxide (see ilmenite ore)		
Soap, beads or granules	15	35	Tobacco, scraps	15	25
Soap, chips	15	25	Tobacco, snuff		30
Soap, detergent	15	50	Tricalcium phosphate	40	50
Soap, flakes			Triple super phosphate	50	55
Soap, powder			Trisodium phosphate		60
Soapstone, talc fine	40	50	Trisodium phosphate, granular		60
Soda ash, heavy	55	65	Trisodium phosphate, pulverized		50
Soda ash, light	20	35	Tung nut meats, crushed		28
Sodium aluminate, ground		72	Tung nuts	25	30
Sodium aluminum fluoride (see kryolite)			Urea Prills, coated	43	46
Sodium aluminum sulfate		75	Vermiculite, expanded		16

Ingredient Bulk Density Table

Ingredient	Bulk Density (lb/cu.ft.)	
	Loose	Packed
Vermiculite, ore		80
Vetch		48
Walnut shells, crushed	35	45
Wheat	45	48
Wheat, cracked	40	45
Wheat, germ	18	28
White lead ,dry	75	100
Wood chips, screened	10	30
Wood flour	16	36
Wood shavings	8	16
Zinc, concentrate residue	75	78
Zinc oxide, heavy	30	35
Zinc oxide, light	10	15



Head Office:
 6500 Kestrel Road
 Mississauga, Ontario
 Canada, L5T 1Z6

Telephone: (905) 670-2933
 Toll Free: (888) 284-4574
 Facsimile: (905) 670-2557
 Email: sales@brabenderti.com