

BULK MATERIAL DENSITY CHARTS

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Alfalfa Meal	14-22
Alfalfa Pellets	41-43
Alfalfa Seed	10-15
Almonds, Broken	28-30
Almonds, Whole Shelled	28-30
Alum, Fine	45-50
Alum, Lumpy	50-60
Alumina Fines	35
Alumina	50-65
Alumina Sized or Briquette	65
Aluminum Chips, Oily	7-15
Aluminum Chips, Dry	7-15
Aluminum Hydrate	13-20
Aluminum Oxide	60-120
Aluminum Silicate (Andalusite)	49
Aluminum Sulfate	45-58
Aluminum Chloride, Crystalline	45-52
Aluminum Nitrate	45-62
Aluminum Sulfate	45-58
Ammonium Chloride	45-52
Ammonium Nitrate	45
Ammonium Sulfate, Granular	45-58
Ash, Black Ground	105
Ashes, Coal, Dry-1/2"	34-35
Ashes, Coal, Dry-3" & under	35-40
Ashes, Coal, Wet-1/2"	45-50
Ashes, Coal, Wet-3" & under	45-50
Asphalt Binder	80-85
Asphalt, Crushed-1/2"	45
Bakelite, Fine	30-45
Baking Powder	40-55
Baking Soda (Sodium Bicarbonate)	40-55
Barite (Barium Sulfate)+1/2"	120-180
Barite, Powder	120-180
Barium, Carbonate	72
Bark, Wood, Refuse	10-20
Barley, Fine, Ground	24-38
Barley, Malted	31
Barley, Meal	28
Barley, Scoured	41
Barley, Whole	36-48
Basalt	80-105
Bauxite, Dry, Ground	68
Bauxite, Crush-3	75-85
Bauxite, Mine Run	66-90
Beets, Whole	48
Bentonite, Crude	35-40
Benzene Hexachloride	56
Blood, Dried	35-45
Blood, Ground	30
Bones, Whole	35-50
Bones, Crushed	35-50
Bones, Ground	50
Bonemeal	50-60
Bone Ash (Tricalcium Phosphate)	40-50

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Borax 2"-3" Lump	60-70
Borax 1 1/2"-2" Lump	55-60
Borax Screening - 1/2"	55-60
Borax, Fine	45-55
Boric Acid, Fine	55
Boron	75
Bran, Rice-Rye Wheat	16-20
Brewer's Grain, Spent, Dry	14-30
Brewer's Grain, Spent, Wet	55-60
Brick, Hard Burned	125
Brick, Soft Burned	100
Brick, Ground 1/8"	100-120
Bronze Chips	30-50
Buckwheat	37-42
Calcine, Flour	75-85
Calcium Acetate	125
Calcium Carbide (Crushed)	70-80
Calcium Lactate	26-29
Calcium Carbonate	90-100
Calcium Oxide (See Lime, Unslaked)	40-50
Carbon, Activated, Dry, Fine	8-20
Carbon, Black, Pelleted	20-25
Carbon, Black, Powder	4-7
Carborundum	100
Cashew Nuts	32-37
Cast Iron, Chips	130-200
Caustic Soda	88
Caustic Soda, Flakes	47
Cement, Clinker	75-95
Cement, Portland	94
Cement, Aerated (Portland)	60-75
Cement, Mortar	133
Chalk, Crushed	75-95
Chalk, Pulverized	67-75
Charcoal, Lumps	18-28
Charcoal, Ground	18-28
Chips Hogged Fuel	15-25
Chrome Ore	125-140
Cinders, Blast Furnace	57
Cinders, Coal	40
Clay, Calcined	80-100
Clay, Brick, Dry, Fines	100-120
Clay, Ceramic, Dry, Fines	60-80
Clay, Dry, Lumpy	60-75
Coal, Anthracite, Sized - 1/2"	55-60
Coal, Bituminous, Mined 50M & under	50-54
Coal, Bituminous, Mined	40-60
Coal, Bituminous, Mined, Sized	45-55
Coal, Bituminous, Mined, Run of Mine	45-55
Coal, Bituminous, Mined, Slack	43-50
Coal, Bituminous, Stripping, Not cleaned	50-60
Coal, Lignite	40-45
Coal, Char	24
Cocoa Beans	30-40
Cocoa , Nibs	35

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Cocoa, Powdered	50
Coconut, Shredded	29
Coffee, Green Bean	45-60
Coffee, Ground, Dry	70-80
Coffee, Ground, Wet	85
Coffee, Roasted Bean	65-85
Coffee, Soluble	110-130
Coke, Loose	90-110
Coke, Petroleum, Calcined	65-75
Coke, Breeze, 1/4 inch and under	90-100
Concrete, Cinder	90-100
Concrete, 2 Inch Slump	104
Concrete, 4 Inch Slump	115
Concrete, 6 Inch Slump	85-90
Concrete, In Place, Stone	10-13
Concrete, Pre-Mix, Dry	65
Copper Ore	27-41
Copper Ore, Crushed	90-100
Copper Sulfate (Bluestone)	85-90
Cork, Fine Ground	80
Cork, Granulated	31
Corn, Cracked	80
Corn Cobs, Ground	130-180
Corn Cobs, Whole	60-65
Corn, Ear	90-100
Corn Germ	80-90
Corn Grits	70-80
Corn Oil Cake	82-85
Corn, Seed	85-95
Corn, Shelled	40-50
Corn, Sugar	45-55
Cornmeal	15-35
Cottonseed Cake, Crushed	15-25
Cottonseed Cake, Lumpy	15-50
Cottonseed, Dry, Delinted	5-15
Cottonseed, Dry, Not Delinted	20-25
Cottonseed Flakes	40-50
Cottonseed Hulls	50
Cottonseed Meal, Extracted	55-65
Cottonseed Meal, Expeller	20-35
Cottonseed Meats, Dry	75
Cottonseed Meats, Rolled	72
Cracklings, Crushed	75
Cullet, Fine	70-80
Cullet, Lump	50-60
Diatomaceous Earth	96
Dicalcium Phosphate	40-43
Disodium Phosphate	30-40
Distillers' Grain, Spent, Dry	18-25
Distillers' Grain, Spent, Wet	27-30
Dolomite, Crushed	40
Dolomite, Lumpy	40
Earth, As Excavated, dry	45-50
Earth, Loam, Dry, Loose	25-50
Earth, Wet, Containing Clay	100-150

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Epsom Salts	40-50
Feldspar, Ground	65-80
Feldspar, Lumps	90-100
Feldspar, Powder	100
Feldspar, Screening	70-85
Ferrous Sulfate	60-70
Ferrous Sulfide, 1/2 Inch	120-135
Ferrous Sulfide, Powder	105-120
Fish Meal	35-40
Fish Scrap	40-50
Flaxseed	45
Flaxseed Cake (Linseed Cake)	48-50
Flaxseed Meal (Linseed Meal)	25
Flour, Wheat	35-40
Flue Dust, Blast Furnace	110-125
Flue Dust, Basic Oxygen Furnace	45-60
Flue Dust, Boiler House, Dry	35-40
Fluorspar Fine (Calcium Fluoride)	80-100
Fluorspar, Lumps, 1-1/2 to 3 Inch	90-100
Fluorspar, Screenings, 1/2 Inch	85-105
Fly Ash	30-45
Foundry Refuse, Old Sand Cores, Etc	70-100
Fuller's Earth, Dry, Raw	30-35
Fuller's Earth, Oily, Spent	60-65
Fuller's Earth, Burned, Roasted	40
Glass Batch	80-100
Glue, Ground	40
Glue, Pearl	40
Glue, Vegetable, Powdered	40
Gluten Meal	40
Granite, Broken	95-100
Granite, Lumps 1-1/2-3 Inch	85-90
Granite, Screenings, 1/2 Inch	80-90
Graphite, Flake	40
Graphite Flour	28
Graphite Ore	65-75
Grass Seed	10-12
Gravel, Bank Run	90-100
Gravel, Dry, Sharp	90-100
Gravel, Pebbles	90-100
Gypsum, Calcined	55-60
Gypsum, Calcined, Powdered	60-80
Gypsum Dust, Aerated	60-70
Gypsum Dust, Non Aerated	93
Gypsum, Lumps, 1-1/2 to 3 Inch	70-80
Gypsum, Raw, 1 Inch	70-80
Gypsum, Screenings, 1/2 Inch	70-80
Guano, Dry	70
Hops, Spent, Dry	35
Hops, Spent, Wet	50-55
Iron Borings, Machine Shop	125
Iron Ore	100-200
Iron Ore, Concentrates	120-180
Iron Ore, Crushed	135-150
Iron Oxide, Pigment	25

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MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Iron Oxide, Mill Scale	75
Kaffir Corn	40-45
Kaolin Clay, 3 Inch and Under	63
Kaolin Clay, Talc, 100 Mesh	42-56
Lactose	32
Lead Arsenate	72
Lead Arsenite	72
Lead Carbonate	240-260
Lead Ore, 1/8 Inch	200-270
Lead Ore, 1/2 Inch	180-230
Lead Oxide (Red Lead) 100 Mesh	30-150
Lead Oxide (Red Lead) 200 Mesh	30-180
Lead Sulfide, 100 Mesh	240-260
Lime, Ground, 1/8 Inch and Under	60-65
Lime, Hydrated, 1/8 Inch and Under	40
Lime, Hydrated, Pulverized	32-40
Lime, Pebble	56-56
Limestone, Agricultural, 1/8 Inch and Under	68
Limestone, Crushed	85-90
Limestone, Dust	55-95
Litharge, Pulverized (Lead Oxide)	200-250
Magnesium, Chloride	33
Malt, Dry Ground	20
Malt, Dry Whole	20-30
Malt, Meal	36-40
Malt, Sprouts	13-15
Malt, Wet or Green	60-65
Manganese Dioxide	70-85
Manganese Ore	125-140
Manganese Oxide	120
Manganese Sulphate	70
Marble, Crushed	80-95
Meat, Scrap with Bone	40
Mica, Flakes	17-22
Mica, Ground	13-15
Mica, Pulverized	13-15
Milk, Dried Flakes	5-6
Milk, Malted	30-35
Milk, Powdered	20-45
Milk, Whole, Powdered, Dry	20-36
Milk Sugar	32
Mill Scale	120-125
Milo	40-45
Milo, Ground	32-36
Molybdite, Powder	107
Mortar, Wet	150
Mustard Seed	45
Monosodium Phosphate	50
Niacin (Nicotinic Acid)	35
Nickel (Cobalt Sulphate Ore)	80-150
Oats	26
Oats, Crimped	19-26
Oats, Crushed	22
Oats, Rolled	35
Oat Flour	19-24

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Oat Hulls	8-12
Oil Cake	45-50
Orange Peel, Dry	15
Oxalic Acid, Crystals	60
Oyster Shells, Ground	50-60
Oyster Shells, Whole	80
Paper Pulp (4% or less)	62
Paper Pulp (6% to 15%)	60-62
Peanuts, Raw, Uncleaned, Unshelled	15-20
Peanuts, Clean, In Shell	15-20
Peanuts, Shelled	35-45
Peanut Meal	30
Peas, Dried	45-50
Perlite, Expanded	8-12
Perlite, Expanded, Powder	4-12
Phosphate Acid Fertilizer	60
Phosphate Rock Broken	75-85
Phosphate Rock Pulverized	60
Phosphate Sand	90-100
Phosphate, Triple Super, Ground	50-55
Polyethylene Resin, Pellets	30-35
Polystyrene Beads	40
Polyvinyl Chloride, Pellets	20-30
Polyvinyl Chloride, Powder	20-30
Potash (Muriate) Dry	70
Potash (Muriate) Mine Run	75
Potash Salt (Sylvite)	80
Potassium Carbonate	51
Potassium Chloride, Pellets	120-130
Potassium Nitrate	76
Potassium Nitrate	80
Potassium Sulfate	42-48
Potato Flour	48
Pumice, Ground	40-45
Pyrites, Iron	135-145
Pyrites, Iron, Pellets	120-130
Quartz Dust	70-80
Quartz	80-95
Rice, Hulled	45-49
Rice, Polished	30
Rice, Rough	32-36
Rice Bran	20
Rice Grits	42-45
Rice Hulls	20-21
Rubber, Reclaimed, Ground	23-50
Rubber, Reclaimed	25-30
Rubber, Pellets	50-55
Rye	42-48
Rye Feed	33
Rye Meal	35-40
Rye Middlings	42
Rye Bran	15-20
Rye, Shorts	32-33
Safflower Seed	45
Safflower Cake	50

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MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Safflower Meal	50
Salicylic Acid	29
Salt, Dry Coarse	45-60
Salt, Dry Fine	70-80
Salt Cake, Dry Coarse	85
Salt Cake, Dry Pulverized	65-85
Sand, Dry, Bank (Damp)	110-130
Sand, Dry, Bank (Dry)	90-110
Sand, Foundry, Prepared	65-75
Sand, Foundry (Shake Out)	90-100
Sand, Dry Silica	90-100
Sand, (Resin Coated) Silica	104
Sand, (Resin Coated) Zircon	115
Sandstone, Broken	85-90
Sawdust, Dry	10-13
Sea-Coal	65
Sesame Seed	27-41
Shale, Broken	90-100
Shale, Crushed	85-90
Shellac	80
Shellac, Powdered or Granulated	31
Silica, Flour	80
Slag, Blast Furnace, Crushed	130-180
Slag, Furnace, Granular, Dry	60-65
Slag, Furnace, Granular, Wet	90-100
Slate, Crushed, Minus 6	80-90
Slate, Dust	70-80
Slate, Crushed, Minus 1/8	82-85
Slate, Lump	85-95
Sludge, Sewage, Dried	40-50
Sludge, Sewage, Dry Ground	45-55
Soap, Beads or Granules	15-35
Soap, Chips	15-25
Soap, Detergent	15-50
Soap, Flakes	5-15
Soap, Powder	20-25
Soapstone, Talc, Fine	40-50
Soda Ash Briquettes	50
Soda Ash, Heavy	55-65
Soda Ash, Light	20-35
Soda Alum	75
Sodium Aluminate, Ground	72
Sodium Aluminate Sulphate	75
Sodium Nitrate	70-80
Sodium Phosphate	50-60
Sodium Sulfite	96
Soy Bean, Cake	40-43
Soy Bean, Cracked	30-40
Soy Bean, Flake, Raw	18-25
Soy Bean, Flour	27-30
Soy Bean Meal, Cold	40
Soy Bean Meal, Hot	40
Soy Beans, Whole	45-50
Starch	25-50
Steel, Turnings, Crushed	100-150

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Steel, Trimmings	75-150
Sugar Beet Pulp, Dry	12-15
Sugar Beet Pulp, Wet	25-45
Sugar, Refined, Granulated, Wet	50-55
Sugar, Raw	55-65
Sugar Cane, Knifed	15-18
Sulphur, Crushed Minus 1/2	50-60
Sulphur, Lumpy Minus 3"	80-85
Sulphur, Powdered	50-60
Sunflower, Seed	19-38
Taconite, Pellets	116-130
Talcum Powder	50-60
Talcum, Minus 1/2"	80-90
Talc, Solid	165
Tallow	58
Tanbark, Ground	55
Trap Rock, Screenings	90-100
Trap Rock, Lumps	100-110
Tricalcium Phosphate	40-50
Trisodium Phosphate	60
Trisodium Phosphate, Granular	60
Trisodium Phosphate, Pulverized	50
Triple Super Phosphate	50-55
Urea Prills, Coated	43-46
Vermiculite, Ore	80
Vermiculite, Expanded	16
Vetch	48
Walnut Shells, Crushed	35-45
Wheat	45-48
Wheat Bran	16-20
Wheat, Cracked	40-45
Wheat, Flour	33-40
Wheat, Germ	18-28
Wheat, Middlings	20-24
White Lead, Dry	75-100
Wood Chips, Screened	10-30
Wood Chips, Hogged Fuel	15-25
Wood, Flour	16-36
Wood, Shavings	8-16
Zinc, Concentrate Residue	75-80
Zinc, Dust	200
Zinc, Ore, Crushed	160
Zinc, Ore, Roasted	110
Zinc Oxide, Heavy	30-35
Zinc Oxide, Light	10 15

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