

APPROXIMATE WEIGHTS OF COMMODITIES AND MATERIALS

The following list of commodities and materials have been compiled from various sources and are believed to be reliable. Where variations are indicated, it is suggested that the actual weights be checked, if practical. As most commodities and materials vary in weight and the containers vary in shape and size, it is only possible to list the average weights shown. If accurate weights are required, they should be obtained from local sources. This data will facilitate the calculation of reasonably accurate load capacities. It is pointed out, however, that only through making test loads can actual load capacity be accurately determined.

COMMODITY	kg/m ³	COMMODITY	kg/m ³	COMMODITY	kg/m ³	COMMODITY	kg/m ³	COMMODITY	kg/m ³
Asbestos	2450	Crushed stone	1600	Manure (farmyard)	1100	Sandstone, crushed	1380	Wood (soft)	40
Ashes	720	Dolomite	2900	Marble, crushed	1520	Sawdust	208	Wood flour	576
Asphalt	1482	Earth, loose, dry	1216	Marble (solid)	2650	Sesame seed	432	Zinc concentrate	
Ballast (dry)	1725	Earth, packed	1520	Marble (loose)	1545	Shale (broken)	95	residue	1280
Ballast (wet)	1925	Earth, wet	2000	Mica	2965	Silica	2000	Zinc ore, crushed	2560
Barytes (mineral)	4484	Earth & gravel (dry)	1600	Mica (flake)	520	Silica gel	720	Zinc oxide, heavy	560
Basalt (rock)	2965	Earth & gravel (wet)	1925	Mica (powder)	986	Slag (bank)	1115	Zinc oxide, light	240
Bauxite	2562	Earth & sand (dry)	1600	Milk, dried flake	96	Slag, furnace	2000		
Bentonite, crude	640	Earth & sand (wet)	1925	Milk, malted	560	Slag, furnace, granular	1040		
Bentonite, 100 mesh and under	960	Feldspar	2560	Milk, whole, powered	320	Slag, furnace, lumpy	2880		
Bicarbonate of soda	656	Ferrous sulphate	1200	Molybdenum ore	1600	Slag (screenings)	1600	LIQUIDS	kg/lit
Borax, fine	848	Fish meal	640	Mortar, lime	1760	Slag (machine)	1530	Acid (carbolic)	0.96
Bricks	3150	Flour, wheat	640	Mortar, rubish	2467	Slag (sand)	880	Acid (hydrochloric)	1.20
Bricks (facing)	3300	Flue dust, boiler house, dry	720	Mud (dry)	1450	Slag (shale)	2600	Acid (muriatic)	1.00
Bricks (blue) (per 100)	4000	Gelatine, granulated	512	Mud (wet)	1750	Slate (broken)	90	Acid (nitric)	1.22
Bricks (clay)	1753	Granite, crushed	1600	Nickel-cobalt sulphate ore	1280	Soap chips	400	Acid (sulphuric)	1.85
Bricks (paving)	2525	Granite, solid	3600	Oats	416	Soap detergents	800	Acetic acid	1.06
Blocks (paving)	2190	Grain (maize)	600	Ores: Aluminium	2562	Soap flakes	240	Alcohol, comm.	0.83
Brick-soft	2385	Grain (barley)	600	Copper	4190	Soap powder	400	Alcohol, pure	0.79
Brick-pressed	3864	Grain (kaffir corn)	800	Iron	3796	Soad ash, heavy	1040	Ammonia	0.89
Cement	897	Grain (wheat)	800	Manganese	7620	Soad ash, light	560	Benzline	0.69
Cement, Portland	1360	Graphite	2722	Tungsten	19213	Sodium bicarbonate	656	Benzol	0.88
Chalk	2194	Graphite, flake	640	Lead	7267	Sodium nitrate	1280	Bitumen	0.85
Charcoal	400	Gravel, dry	1520	Tin	4645	Sodium phosphate	800	Bromine	2.97
Chrome ore	2240	Gravel, wet	2000	Pear, solid, dry	760	Sodium sulphate	1360	Carbolic acid	0.96
Cinders	800	Gravel & sand (dry loose)	1600	Peanuts	290	Sorghum seed	832	Carbon disulphide	1.26
Clay, dry loose	1186	(dry packed)	1750	Phosphate, rock	3200	Soybeans, cracked	640	Cotton seed oil	0.93
Clay, wet loose	1760	(wet) 1910	1910	Platinum ore	2600	Soybeans, whole	800	Creosote	1.00
Clay, packed	2160	Gypsum	2400	Polystyrene beads	640	Soybean flour	432	Diesel	0.81-0.86
Clay, fire	2000	Gypsum, calcined	976	Potassium carbonate	816	Starch	1540	Ether, sulphuric	0.72
Clay, gravel dry	1600	Gypsum, calcined powered	1280	Potassium sulphate	768	Stone (crushed)	1600	Fluoric acid	1.50
Clay, calcined	1280	Gypsum, raw	1600	Potash ore	1370	Stone (crusher run)	1750	Gasoline	0.70
Clay, fine dry	1920	Iron ore	2400	Potatoes (loose)	531	Straw (per truss)	16.3	Jet A1	0.77-0.8
Clay, lumpy, loose	1200	Iron pyrites	2400	Pumice	640	Sugar (bulk)	1590	Kerosene	0.80
Coal-anthracite	880	Iron sulphate (dry)	1200	Pyrites	4900	Sugar beet	530	Linseed oil	0.94
Coal-bituminous	900	Iron sulphate (wet)	1290	Rubber	930	Sugar, granulated	880	Milk	1.03
Cocoa beans	640	Lactose	512	Quartz	2640	Sugar, powered	960	Mineral oil	0.92
Cocoa nibs	560	Lead arsenate	1152	Quartz (broken)	1600	Sugar, raw, cane	1040	Muriatic acid	1.20
Cocoa powder	560	Lead	3200	Quicklime	1520	Sulphur (loose)	2015	Naphta	0.76
Coconut, shereded	352	Lignite	800	Rice, hulled or polished	768	Taconite, pellets	1600	Nitric acid	1.50
Coffee, chaff	320	Lime, hydrated	995	Rice, rough	576	Talcum powder	960	Oil (castrol)	0.97
Coffee, green bean	512	Lime, hydrated pulverized	640	Rye	704	Tanbark, ground	880	Oil (coconut)	0.94
Coffee, ground	400	Limestone (solid)	2700	Salicylic acid	464	Tar	1000	Oil (cottonseed)	0.93
Coffee, roasted bean	416	Limestone (loose)	1530	Salt, common dry coarse	800	Tiles		Oil (fuel)	0.95
Coffee, soluble	304	Limestone, agricultural	1088	Salt, common dry fine	1280	(machine made)	1016	Oil (linseed)	0.94
Coke	513	Limestone, crushed	1520	Salt cake dry pulverized	1360	Tiles (ridged)	4064	Oil (lubricating)	0.94
Coke, loose	600	Limestone, dust	1200	Sand (dry-river)	1400	Tiles (gables)	1524	Oil (olive)	0.93
Coke, petroleum, calcined	720	Magnesite	2995	Sand (wet-river)	1700	Titanium, sponge	1120	Oil (turpentine)	0.87
Concrete (dry mix)	1250	Magnesium chloride	528	Sand (dry-building)	1300	Tobacco leaves, dry	224	Oil (palm)	0.97
Concrete (wet mix)	2375	Magnesium sulphate	1130	Sand (wet-building)	1400	Vermiculite, expanded	256	Oil (petroleum)	0.82
Copper ore	2400	Malt, dry ground	352	Sand, dry	1760	Vermiculite, ore	1280	Oil (rape)	0.92
Copper sulphate		Malt, dry, whole	480	Sand, wet	2000	Wheat	768	Oil (whale)	0.92
Corn, cracked	800	Malt, wet or green	1040	Sand, foundry prepared	1440	Wheat, cracked	720	Parafin	0.87
Corn, seed	720	Malt meal	640	Sand, foundry shakeout	1440	Wheat germ	448	Petrol (LR&UL)	0.70-0.78
Corn, shelled	720	Manganese dioxide	1280	Sand, silica, dry	1600	Woods: bamboo	720	Phosphoric acid	1.72
Corn, grain	336	Manganese ore	2240			gumwood	583	Sulphuric acid	1.84
Corn, sugar	496					pine (white)	432	Syrup	1.35
Cottonseed, dry, de-linted	560					pine	512	Tar	1.00
Cottonseed, dry, not de-linted	400					poplar	432	Turpentine oil	0.87
Cottonseed, flakes	400					Wood chips	480	Vinegar	1.08
						Wood chips (dry)	32	Water	1.00
						Wood (hard)	75	Water, sea	1.03

APPROXIMATE WEIGHTS OF COMMODITIES AND MATERIALS

The following list of commodities and materials have been compiled from various sources and are believed to be reliable. Where variations are indicated, it is suggested that the actual weights be checked, if practical. As most commodities and materials vary in weight and the containers vary in shape and size, it is only possible to list the average weights shown. If accurate weights are required, they should be obtained from local sources. This data will facilitate the calculation of reasonably accurate load capacities. It is pointed out, however, that only through making test loads can actual load capacity be accurately determined.

COMMODITY	kg/m ³	COMMODITY	kg/m ³	COMMODITY	kg/m ³	COMMODITY	kg/m ³	COMMODITY	kg/m ³
Asbestos	2450	Crushed stone	1600	Manure (farmyard)	1100	Sandstone, crushed	1380	Wood (soft)	40
Ashes	720	Dolomite	2900	Marble, crushed	1520	Sawdust	208	Wood flour	576
Asphalt	1482	Earth, loose, dry	1216	Marble (solid)	2650	Sesame seed	432	Zinc concentrate	
Ballast (dry)	1725	Earth, packed	1520	Marble (loose)	1545	Shale (broken)	95	residue	1280
Ballast (wet)	1925	Earth, wet	2000	Mica	2965	Silica	2000	Zinc ore, crushed	2560
Barytes (mineral)	4484	Earth & gravel (dry)	1600	Mica (flake)	520	Silica gel	720	Zinc oxide, heavy	560
Basalt (rock)	2965	Earth & gravel (wet)	1925	Mica (powder)	986	Slag (bank)	1115	Zinc oxide, light	240
Bauxite	2562	Earth & sand (dry)	1600	Milk, dried flake	96	Slag, furnace	2000		
Bentonite, crude	640	Earth & sand (wet)	1925	Milk, malted	560	Slag, furnace, granular	1040		
Bentonite, 100 mesh and under	960	Feldspar	2560	Milk, whole, powered	320	Slag, furnace, lumpy	2880		
Bicarbonate of soda	656	Ferrous sulphate	1200	Molybdenum ore	1600	Slag (screenings)	1600	LIQUIDS	kg/lit
Borax, fine	848	Fish meal	640	Mortar, lime	1760	Slag (machine)	1530	Acid (carbolic)	0.96
Bricks	3150	Flour, wheat	640	Mortar, rubbish	2467	Slag (sand)	880	Acid (hydrochloric)	1.20
Bricks (facing)	3300	Flue dust, boiler house, dry	720	Mud (dry)	1450	Slag (shale)	2600	Acid (muriatic)	1.00
Bricks (blue) (per 100)	4000	Gelatine, granulated	512	Mud (wet)	1750	Slate (broken)	90	Acid (nitric)	1.22
Bricks (clay)	1753	Granite, crushed	1600	Nickel-cobalt sulphate ore	1280	Soap chips	400	Acid (sulphuric)	1.85
Bricks (paving)	2525	Granite, solid	3600	Oats	416	Soap detergents	800	Acetic acid	1.06
Blocks (paving)	2190	Grain (maize)	600	Ores: Aluminium	2562	Soap flakes	240	Alcohol, comm.	0.83
Brick-soft	2385	Grain (barley)	600	Copper	4190	Soap powder	400	Alcohol, pure	0.79
Brick-pressed	3864	Grain (kaffir corn)	800	Iron	3796	Soad ash, heavy	1040	Ammonia	0.89
Cement	897	Grain (wheat)	800	Manganese	7620	Soad ash, light	560	Benzline	0.69
Cement, Portland	1360	Graphite	2722	Tungsten	19213	Sodium bicarbonate	656	Benzol	0.88
Chalk	2194	Graphite, flake	640	Lead	7267	Sodium nitrate	1280	Bitumen	0.85
Charcoal	400	Gravel, dry	1520	Tin	4645	Sodium phosphate	800	Bromine	2.97
Chrome ore	2240	Gravel, wet	2000	Pear, solid, dry	760	Sodium sulphate	1360	Carbolic acid	0.96
Cinders	800	Gravel & sand (dry loose)	1600	Peanuts	290	Sorghum seed	832	Carbon disulphide	1.26
Clay, dry loose	1186	(dry packed)	1750	Phosphate, rock	3200	Soybeans, cracked	640	Cotton seed oil	0.93
Clay, wet loose	1760	(wet) 1910		Platinum ore	2600	Soybeans, whole	800	Creosote	1.00
Clay, packed	2160	Gypsum	2400	Polystyrene beads	640	Soybean flour	432	Diesel	0.81-0.86
Clay, fire	2000	Gypsum, calcined	976	Potassium carbonate	816	Starch	1540	Ether, sulphuric	0.72
Clay, gravel dry	1600	Gypsum, calcined powered	1280	Potassium sulphate	768	Stone (crushed)	1600	Fluoric acid	1.50
Clay, calcined	1280	Gypsum, raw	1600	Potash ore	1370	Stone (crusher run)	1750	Gasoline	0.70
Clay, fine dry	1920	Iron ore	2400	Potatoes (loose)	531	Straw (per truss)	16.3	Jet A1	0.77-0.8
Clay, lumpy, loose	1200	Iron pyrites	2400	Pumice	640	Sugar (bulk)	1590	Kerosene	0.80
Coal-anthracite	880	Iron sulphate (dry)	1200	Pyrites	4900	Sugar beet	530	Linseed oil	0.94
Coal-bituminous	900	Iron sulphate (wet)	1290	Rubber	930	Sugar, granulated	880	Milk	1.03
Cocoa beans	640	Lactose	512	Quartz	2640	Sugar, powered	960	Mineral oil	0.92
Cocoa nibs	560	Lead arsenate	1152	Quartz (broken)	1600	Sugar, raw, cane	1040	Muriatic acid	1.20
Cocoa powder	560	Lead	3200	Quicklime	1520	Sulphur (loose)	2015	Naphta	0.76
Coconut, shereded	352	Lignite	800	Rice, hulled or polished	768	Taconite, pellets	1600	Nitric acid	1.50
Coffee, chaff	320	Lime, hydrated	995	Rice, rough	576	Talcum powder	960	Oil (castrol)	0.97
Coffee, green bean	512	Lime, hydrated pulverized	640	Rye	704	Tanbark, ground	880	Oil (coconut)	0.94
Coffee, ground	400	Lime, pebble	896	Salicylic acid	464	Tar	1000	Oil (cottonseed)	0.93
Coffee, roasted bean	416	Limestone (solid)	2700	Salt, common dry coarse	800	Tiles (machine made)	1016	Oil (fuel)	0.95
Coffee, soluble	304	Limestone (loose)	1530	Salt, common dry fine	1280	Tiles (ridged)	4064	Oil (linseed)	0.94
Coke	513	Limestone, agricultural	1088	Salt cake dry pulverized	1360	Tiles (gables)	1524	Oil (lubricating)	0.94
Coke, loose	600	Limestone, crushed	1520	Sand (dry-river)	1400	Titanium, sponge	1120	Oil (olive)	0.93
Coke, petroleum, calcined	720	Limestone, dust	1200	Sand (wet-river)	1700	Tobacco leaves, dry	224	Oil (turpentine)	0.87
Concrete (dry mix)	1250	Limestone, 2995		Sand (dry-building)	1300	Vermiculite, expanded	256	Oil (palm)	0.97
Concrete (wet mix)	2375	Magnesite	2995	Sand (wet-building)	1400	Vermiculite, ore	1280	Oil (petroleum)	0.82
Copper ore	2400	Magnesium chloride	528	Sand, dry	1760	Wheat	768	Oil (rape)	0.92
Copper sulphate		Magnesium sulphate	1130	Sand, wet	2000	Wheat, cracked	720	Oil (whale)	0.92
Corn, cracked	800	Magnesium oxide	1940	Sand, foundry prepared	1440	Wheat, germ	448	Parafin	0.87
Corn, seed	720	Malt, dry ground	352	Sand, foundry shakeout	1440	Woods: bamboo	720	Petrol (LR&UL)	0.70-0.78
Corn, shelled	720	Malt, dry, whole	480	Sand, silica, dry	1600	Woods: gumwood	583	Phosphoric acid	1.72
Corn, grain	336	Malt, wet or green	1040			pine (white)	432	Sulphuric acid	1.84
Corn, sugar	496	Malt meal	640			pine	512	Syrup	1.35
Cottonseed, dry, de-linted	560	Manganese dioxide	1280			poplar	432	Tar	1.00
Cottonseed, dry, not de-linted	400	Manganese ore	2240			Wood chips	480	Turpentine oil	0.87
Cottonseed, flakes	400					Wood chips (dry)	32	Vinegar	1.08
						Wood (hard)	75	Water	1.00
								Water, sea	1.03