

# MATERIALS TABLE

Material	Maximum Particle Size (IN.)	Average Weight Per Cu.Ft.	% Loading	H.P. Factor	Component Series	Abrasiveness	Corrosiveness	Flowability	NOTE
Acetylenogen (Calcium Carbide)	+1/2	70-80	30B	1.6	B4	II	I	II	1
Adipic Acid	-100M	45	30A	0.8	D3	I	II	II	3
Alfalfa Meal	-1/8	17	30A	0.9	B4	II	I	III	7
Alfalfa Seed	-1/8	48	30B	0.5	B4	II	I	I	1
Almonds	-1/2	28-30	30B	0.9	B4	II	I	II	6
Alum	-1/8	45-58	30A	0.6	A2	I	I	II	●
Alum, lumpy	+1/2	50-60	30A	1.4	B1	I	I	II	●
Alumina	-100M	60-120	15	1.8	C4	III	I	I	2
Aluminate Gell, dried	-100M	45	30B	1.7	B4	II	I	II	
Aluminum Chips	-1/2	7-15	30A	0.8	A2	I	I	III	9
Aluminum Hydrate (Aluminum Hydroxide)	-1/2	13-18	30A	1.4	A2	I	I	III	
Aluminum Oxide (Alumina)	-100M	60-120	15	1.8	C4	III	I	I	2
Aluminum Ore (Bauxite)	-3	75-85	15	1.8	D4	III	I	II	
Aluminum Silicate	-1/8	49	45	0.8	A2	I	I	II	
Aluminum Sulfate (Alum)	●	●	●	●	●	●	●	●	
Amianthus (Asbestos)	Fibers	20-40	30B	1.0	B4	II	I	III	5, 7, 8
Ammonium Chloride, Crystalline	1/8	52	30A	0.8	A2	I	I	II	
Ammonium Nitrate	-1/8	45-62	●	●	●	●	●	●	● 1, 3
Ammonium Sulfate	●	40-58	●	●	●	●	●	III	●
Andalusite (Aluminum Silicate)	-1/8	49	45	0.8	A2	I	I	II	
Antimony	-100M	●	30B	●	B4	II	I	II	●
Apple Pomace, dry	-1/2	15	30B	0.5	B4	II	I	III	7
Arsenate of Lead (Lead Arsenate)	-1/8	72	30A	1.0	A2	I	I	III	2, 5
Arsenic	-100M	30	●	●	●	●	●	●	● 5
Arsenic Oxide (Arsenolite)	●	100-120	●	●	●	●	●	●	● 5
Asbestos, Ore	-1/2	81	15	1.2	C4	III	I	II	5
Asbestos, Shred	Fibers	20-40	30B	1.0	B4	II	I	III	5, 7, 8
Ashes, Coal, dry	-1/2	35-45	30B	2.0	B4	II	I	III	
Ashes, Coal, dry	-3	35-45	30B	2.0	B4	II	I	III	
Ashes, Coal, wet	-1/2	45-50	30B	3.0	D4	II	II	III	8
Ashes, Coal, wet	-3	40-50	15	4.0	D4	II	II	III	8
Asphalt, Crushed	-1/2	45	30A	2.0	A2	I	I	II	
Bagasse, dry	Fibers	7-10	30A	1.0	B1	I	I	III	5, 7, 8, 9
Bakelite	-100M	30-40	30A	1.4	A2	I	I	III	
Baking Powder	-100M	41	30A	0.6	A2	I	I	II	
Baking Soda (Sodium Bicarbonate)	-100M	70-80	30A	1.0	A2	I	I	II	
Barite	+1/2	120-180	15	2.0	D4	III	I	II	
Barite	-100M	120-180	30B	2.6	B4	II	I	III	2
Barium Carbonate	-100M	72	30B	1.6	B4	II	I	III	5
Barium Sulfate (See Barite)	●	●	●	●	●	●	●	●	
Bark, wood	+1/2	10-20	30B	1.2	B4	II	I	III	9
Barley	-1/8	37-48	45	0.4	A2	I	I	I	1
Baryte (Barite)	●	●	●	●	●	●	●	●	
Basalt	-1/8	80-90	15	1.8	C4	III	I	I	
Bauxite, crushed	-3	75-85	15	1.8	D4	III	I	II	
Beans, Castor	-1/2	36	45	0.5	A2	I	I	I	
Beans, Castor, meal	-1/8	35-40	30A	1.2	A2	I	I	II	
Beans, Navy	-1/2	48	45	0.5	A2	I	I	I	
Beans, Soy	-1/2	45-50	45	0.5	A2	I	I	I	
Beet Pulp, dry	●	11-16	●	●	●	●	●	●	●
Beet Pulp, wet	●	25-45	●	●	●	●	●	●	●
Bentonite	+1/2	34-40	30B	1.2	B4	II	I	III	8
Bentonite	-100M	50-60	30B	0.7	B4	II	I	II	2
Benzene Hexachloride	-100M	56	30A	0.6	A2	I	I	III	5
Bicarbonate of Soda (Baking Powder)	-100M	41	30A	0.6	A2	I	I	II	
Blood, dried	+1/2	35-45	30B	1.7	B4	II	I	III	

Material	Maximum Particle Size (IN.)	Average Weight Per Cu.Ft.	% Loading	H.P. Factor	Component Series	Abrasiveness	Corrosiveness	Flowability	NOTE
Blood, ground	-100M	30	30A	0.6	A2	I	I	II	
Bluestone (Copper Sulfate)	+1/2	60-70	30A	0.6	B1	I	I	II	●
Bone Ash (Tricalcium Phosphate)	-100M	40-50	30A	1.6	A2	I	I	III	
Bones, crushed	-1/2	35-40	30B	2.0	B4	II	I	III	
Bones, ground	-1/8	50	30B	1.7	B4	II	I	II	
Boneblack	-100M	20-25	30B	1.7	B4	II	I	II	
Bonechar	-1/8	40	30B	1.8	B4	II	I	II	
Bonemeal	-1/8	50-60	30B	1.7	B4	II	I	II	
Borate of Lime	-1/8	●	30A	●	A2	I	I	II	●
Borax	-1/2	60	30B	1.0	B4	II	I	II	
Borax	-1/8	50-60	30B	0.7	B4	II	I	II	
Boric Acid	-1/8	55	30A	0.8	A2	I	I	II	
Boron	-100M	75	15	1.0	C4	III	I	II	
Bran	-1/8	10-20	30A	0.4	A2	I	I	II	1, 7
Braunite (Manganese Oxide)	-100M	120	30B	2.0	B4	II	I	II	
Brewers Grain, spent, dry	-1/2	14-30	30A	0.4	A2	I	I	III	
Brewers Grain, spent, wet	-1/2	55-60	30A	0.6	D3	I	II	III	
Bronze chips	-1/8	30-50	15	0.8	C4	III	I	III	
Buckwheat	-1/4	37-42	45	0.4	A2	I	I	I	1
Calcine, flour	-100M	75-85	30A	0.7	A2	I	I	II	
Calcium Carbide	+1/2	70-80	30B	1.6	B4	II	I	II	1
Calcium Carbonate (Limestone)	●	●	●	●	●	●	●	●	
Calcium Fluoride (Fluorspar)	-1/4	82	30B	2.0	B4	II	I	III	
Calcium Hydroxide (Lime, hydrated)	●	●	●	●	●	●	●	●	
Calcium Hydroxide (Lime, hydrated)	●	●	●	●	●	●	●	●	
Calcium Lactate	+1/2	26-29	30A	0.6	B1	I	I	III	6, 8
Calcium Magnesium Carbonate	+1/2	90-100	30B	2.0	B4	II	I	II	
Calcium Oxide (Lime, unslaked)	●	●	●	●	●	●	●	●	
Calcium Phosphate	-100M	40-50	30A	1.6	A2	I	I	III	
Calcium Sulfate (Gypsum)	●	●	●	●	●	●	●	●	
Carbon, activated	-1/8	8-20	30B	1.2	B4	II	I	I	6
Carbon Black, fine	-100M	4-6	30A	0.4	A2	I	I	III	●, 8
Carbon Black, pelleted	-1/8	20-40	●	●	●	●	●	●	●, 3, 8
Carborundum*	-1/2	100	15	3.0	C4	III	I	II	
Casein	-1/8	36	30B	1.6	B4	II	I	II	
Cast Iron, chips	-1/2	130-200	30B	4.0	B4	II	I	III	
Caustic Soda	-1/8	88	30B	1.8	D4	II	III	II	3, 5
Caustic Soda, flakes	-1/4	47	30A	1.5	D4	I	III	III	3, 5, 6, 8
Celite (Diatomaceous Earth)	-100M	11-17	15	1.6	C4	III	I	II	●, 2, 8
Cement, clinker	+1/2	75-80	15	1.8	D4	III	I	II	
Cement, portland	-100M	75-85	30B	1.4	B4	II	I	II	2
Cerrusite (Lead Carbonate)	-100M	240-260	30B	1.0	B4	II	I	II	2, 5
Chalk, crushed	+1/2	85-90	30B	1.9	B4	II	I	III	8
Chalk, ground	-100M	70-75	30B	1.4	B4	II	I	III	2, 8
Charcoal	+1/2	18-25	30B	1.4	B4	II	I	III	6
Chips, pulpwood	+1/2	12-25	30A	1.0	B1	I	I	III	7, 9
Chrome Ore	-1/2	125-140	15	2.5	C4	III	I	II	
Cinders, blast furnace	+1/2	57	15	1.9	D4	III	I	III	
Cinders, Coal	+1/2	40	15	1.6	D4	III	I	II	
Clay, Ceramic, dry	-100M	65-80	30A	1.5	A2	I	I	II	
Clinker, cement	+1/2	75-80	15	1.8	D4	III	I	II	
Clover, seed	-1/8	48	45	0.4	A2	I	I	I	1
Coal, Anthracite	-1/2	52-60	30B	0.9	B4	II	II	II	1
Coal, pulverized	-100M	32-35	30A	0.6	D3	I	II	III	1, 2
Coal, sized	-1/2	50	30B	0.6	B4	II	II	II	1
Cocoa, beans	-1/2	30-45	30A	0.4	A2	I	I	II	6
Cocoa, nibs	-1/2	35	30A	0.5	A2	I	I	II	
Cocoa, powdered	-100M	30-35	30A	0.9	A2	I	I	III	2, 8

\* Trademark of Carborundum Co.

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Cocoanut	shred	20-22	30A	1.0	B1	I	I	III	
Coffee, chaff	1/8	20	30A	0.5	A2	I	I	II	2, 7
Coffee, green bean	-1/2	32-45	30A	0.5	A2	I	I	II	6
Coffee, ground	-1/8	25	30A	0.6	A2	I	I	II	4
Coffee, roasted bean	-1/2	22-26	45	0.4	A2	I	I	I	
Coffee, soluble	-100M	19	15	0.8	A2	I	I	I	2,3,4,6
Coke, loose	+1/2	23-32	15	1.2	D4	III	I	III	6, 9
Coke, calcined	+1/2	35-45	15	1.3	D4	III	I	II	9
Coke, breeze	-1/4	25-35	15	1.2	C4	III	I	III	
Compost	●	28	●	●	●	I	III	III	● 8, 9
Copper Ore	+1/2	120-150	15	4.0	D4	III	I	II	
Copper Sulfate	+1/2	60-70	30A	0.6	B1	I	I	II	●
Copperas (Ferrous Sulfate)	-1/2	50-75	30B	1.0	B4	II	I	II	
Copra	+1/2	22-33	30A	1.0	B1	I	I	II	
Copra, cake	+1/2	25-30	30A	0.7	B1	I	I	II	
Copra, cake, ground	-1/8	40-45	30A	0.7	A2	I	I	II	
Copra, meal	-1/8	40-45	30A	0.7	A2	I	I	II	
Cork, ground	-1/8	5-15	30A	0.5	A2	I	I	III	
Cork, granulated	-1/2	5-15	30A	0.4	A2	I	I	III	
Corn, cracked	-1/2	40-50	30A	0.7	A2	I	I	II	
Corn, seed	-1/4	45	45	0.4	A2	I	I	I	1, 6
Corn, shelled	-1/4	45	45	0.4	A2	I	I	I	1
Corn, germ	-1/8	21	30A	0.4	A2	I	I	II	
Corn, grits	-1/8	40-45	30A	0.5	A2	I	I	II	
Corn, sugar	-1/8	31	30A	1.0	A2	I	I	II	
Corn, meal	-1/8	32-40	30A	0.5	A2	I	I	II	
Cottonseed, dry, delinted	-1/4	22-40	30A	0.9	A2	I	I	II	
Cottonseed, dry, undelinted	-1/4	18-25	30A	0.8	A2	I	I	III	
Cottonseed, cake	+1/2	40-45	30A	1.0	B1	I	I	II	
Cottonseed, flakes	-1/4	20-25	30A	0.8	A2	I	I	III	
Cottonseed, hulls	-1/8	12	30A	0.9	A2	I	I	III	7
Cottonseed, meal	-1/8	35-40	30A	0.4	A2	I	I	II	
Cottonseed, meats	-1/8	40	30A	0.6	A2	I	I	II	
Cracklings	-3	40-50	30A	1.3	B1	I	I	III	
Cryolite	-1/2	90-110	30B	1.8	B4	II	I	II	5
Cryolite	-100M	50-75	30B	2.0	B4	II	I	II	2, 5
Cullet	+1/2	80-120	15	2.0	D4	III	I	II	
Cupric Sulfate (Copper Sulfate)	+1/2	60-70	30A	0.6	B1	I	I	II	●
Diatomaceous Earth (Diatomite)	-100M	11-17	15	1.6	C4	III	I	II	●, 2, 8
Dicalcium Phosphate	-100M	40-50	30A	1.6	A2	I	I	III	
Disodium Phosphate	-1/8	25-31	30B	0.5	B4	II	I	II	6
Dolomite (Calcium Magnesium Carbonate)	+1/2	80-100	30B	2.0	B4	II	I	II	
Earth, loam, dry, loose	-1/8	76	30B	1.2	B4	II	I	III	
Ebonite	-1/2	65-70	30A	0.8	A2	I	I	II	
Epsom Salts	-1/8	40-50	30A	0.7	A2	I	I	II	
Ethanedioic Acid (Oxalic Acid)	-1/8	60	30A	1.0	A2	I	I	III	3
Feldspar	-1/8	100-160	30B	1.5	B4	II	I	II	
Feldspar	-100M	65-75	30B	2.0	B4	II	I	III	
Ferrous Sulphate	-1/2	50-75	30B	1.0	B4	II	I	II	
Ferrous Sulfide (Iron Sulfide)	●	●	●	●	●	●	●	●	
Fish Meal	-1/8	30-40	30A	0.9	A2	I	I	III	
Fish Scrap	●	40-50	30A	●	B1	I	I	III	●
Flaxseed	-1/8	43-45	45	0.4	A2	I	I	I	1
Flaxseed Cake	+1/2	48-50	30A	0.6	B1	I	I	II	
Flaxseed Meal	-1/8	25	30A	0.4	A2	I	I	II	
Floridin (Fuller's Earth)	●	●	●	●	●	●	●	●	
Flour, Wheat	-100M	30-46	30A	0.6	A2	I	I	III	1, 4
Flue Dust, boiler, dry	-100M	40-125	15	3.5	C4	III	I	II	2

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Fluorspar (Fluorite)	-1/4	82-110	30B	2.0	B4	II	I	III	
Fly Ash, dry	-100M	35-45	30B	3.5	C4	III	I	I	2
Foundry Sand, dry	-1/8	90-100	15	2.0	C4	III	I	II	
Fuller's Earth, oil filter, burned	-1/8	40	15	1.5	C4	III	I	II	
Fuller's Earth, oil filter, raw	-1/8	35-40	30B	1.0	B4	II	I	II	
Fuller's Earth, oil filter, spent	35% oil	60-65	15	0.9	D4	III	I	III	
Galena (Lead Sulfide)	-100M	240-260	30B	1.0	B4	II	I	II	2, 5
Gelatin, granulated	-1/2	32	30A	0.8	A2	I	I	II	6
Gilsonite	-1/2	37	30B	1.5	D4	II	II	II	1, 5
Glass, batch	+1/2	80-100	15	1.8	D4	III	I	II	
Glue, ground	-1/8	40	30B	1.7	B4	II	I	II	
Glue, pearl	-1/2	40	45	0.5	A2	I	I	I	
Gluten, meal	-1/8	40	30A	0.6	A2	I	I	II	
Grains, distillery, spent, dry	lumps	30	30A	0.4	B1	I	I	II	7
Graphite Flake	-1/2	40	30A	0.4	A2	I	I	II	
Graphite Flour	-100M	28	45	0.4	A2	I	I	I	2
Graphite Ore	+1/2	65-75	30A	0.4	B1	I	I	I	
Granite, broken	+1/2	95-100	15	2.5	D4	III	I	II	
Grape Pomace	-1/2	15-20	30B	1.4	B4	II	I	III	7
Grass Seed	-1/8	10-32	30A	0.4	A2	I	I	II	1, 7
Green Vitriol (Ferrous Sulfate)	-1/2	50-75	30B	1.0	B4	II	I	II	
Gypsum, calcined	-1/2	55-60	30B	1.2	B4	II	I	II	
Gypsum, calcined	-100M	60-80	30B	0.8	B4	II	I	III	
Gypsum, raw	-1	90-100	30B	1.6	B4	II	I	II	
Hexanedioic Acid (Adipic Acid)	-100M	45	30A	0.8	D3	I	II	II	3
Hominy	-1/2	37-50	30A	0.4	A2	I	I	II	
Hops, spent, dry	Lumps	35	30A	0.8	B1	I	I	III	
Hops, spent, wet	Lumps	50-55	30A	1.0	D3	I	II	III	
Hydroxybenzoic Acid (Salicylic Acid)	-1/8	29	30A	0.6	A2	I	I	II	3
Ice, crushed	+1/2	35-45	30A	0.4	●	●	●	●	
Ilmenite Ore	-1/8	140	15	2.0	C4	III	I	II	
Iron Ore	-1/8	120-180	15	2.0	C4	III	I	II	
Iron Pyrites (Iron Sulfide)	●	●	●	●	●	●	●	●	
Iron Sulfate (Ferrous Sulfate)	-1/2	50-75	30B	1.0	B4	II	I	II	
Iron Sulfide	-1/2	120-135	●	●	A2	I	I	I	
Iron Sulfide	-100M	105-120	●	●	A2	I	I	I	
Iron Vitriol (Ferrous Sulfate)	-1/2	50-75	30B	1.0	B4	II	I	II	
Kaolin Clay	-3	163	30A	1.8	B1	I	I	II	
Kaolin Talc	-100M	42-56	30B	2.0	B4	II	I	III	
Kryolith (Cryolite)	●	●	●	●	●	●	●	●	
Lactose	-100M	32	30A	0.6	A2	I	I	II	4, 8
Lamp Black (Carbon Black)	●	●	●	●	●	●	●	●	
Lead Arsenate	-1/8	72	30A	1.4	A2	I	I	III	2, 5
Lead Arsenite	-1/8	72	30A	1.4	A2	I	I	III	2, 5
Lead Carbonate	-100M	240-260	30B	1.0	B4	II	I	II	2, 5
Lead Ore	-1/2	180-230	15	1.4	C4	III	I	III	5
Lead Oxide	-100M	30-150	30B	1.0	B4	II	I	II	2, 5
Lead Oxide	-200M	30-180	30B	1.2	B4	II	I	II	2, 5
Lead Sulfide	-100M	240-260	30B	1.0	B4	II	I	II	2, 5
Lignite, air dried	+1/2	45-55	30A	0.8	B1	I	I	II	
Limanite	-1/2	120	15	1.7	C4	III	I	III	
Lime, hydrated	-1/8	40	30A	0.8	A2	I	I	II	2, 8
Lime, hydrated	-200M	32-40	30A	0.6	A2	I	I	II	2, 8
Lime, unslaked	-1/8	60	30A	0.6	A2	I	I	III	8
Lime, pebble, unslaked	+1/2	53-56	30A	2.0	B1	I	I	III	
Limestone, agricultural	-1/8	68	30B	1.4	B4	II	I	II	
Limestone, crushed	+1/2	85-90	30B	1.6	B4	II	I	II	
Limestone, dust	-100M	55-95	30B	1.0	B4	II	I	III	2

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Lindane (Benzene Hexachloride)	-100M	56	30A	0.6	A2	I	I	III	5
Linseed (Flaxseed)	●	●	●	●	●	●	●	●	
Litharge (lead Oxide)	-100M	30-150	30B	1.0	B4	II	I	II	2, 5
Lithopone	-100M	120-140	30A	1.0	A2	I	I	II	2, 5
Magnesium Chloride (Magnesite)	-1/2	33	30A	0.8	A2	I	I	III	
Magnesium Sulfate (Epsom Salts)	-1/8	40-50	30A	0.7	A2	I	I	II	
Maize	-1/4	45	45	0.4	A2	I	I	I	1
Malt, dry, ground	-1/8	22	30A	0.4	A2	I	I	II	1, 7
Malt, dry, whole	-1/2	27-30	30A	0.4	A2	I	I	II	1
Malt, wet or green	-1/2	60-65	30A	0.4	A2	I	I	III	
Malt, meal	-1/8	36-40	30A	0.4	A2	I	I	II	
Manganese Dioxide	●	80	●	●	●	●	●	●	●
Manganese Ore	-1/2	125-140	15	2.0	C4	III	I	III	
Manganese Oxide	-100M	120	30B	2.0	B4	II	I	II	
Manganese Sulfate	-1/2	70	15	2.0	C4	III	I	II	
Marble, crushed	-1/2	80-95	15	2.0	C4	III	I	II	
Marl	+1/2	80	30B	1.6	B1	I	I	II	
Meat, ground	-1/4	50-55	●	●	B4	II	I	I	●
Meat	Scraps	40	30B	●	D4	II	I	III	● 9
Mica, ground	-1/8	13-15	30B	0.7	B4	II	I	II	
Mica, pulverized	-100M	13-30	30B	0.9	B4	II	I	II	2
Mica, flakes	-1/8	17-22	30B	1.0	B4	II	I	I	7, 9
Milk, dried, flake	-1/8	5-6	30A	0.4	A2	I	I	II	4
Milk, malted	-100M	27-35	30A	0.4	A2	I	I	III	2, 4, 8
Milk, whole, dried	-100M	20	30A	0.4	A2	I	I	III	2, 3, 4, 8
Milk Sugar (Lactose)	-100M	32	30A	0.6	A2	I	I	II	4, 8
Milo	-1/4	56	30A	0.4	A2	I	I	II	
Monosodium Phosphate	-1/8	50	30B	0.6	B4	II	I	II	
Muriate of Potash	-1/8	77	15	1.8	D4	III	III	II	
Mustard Seed	-1/8	45	45	0.4	A2	I	I	I	1
Nicotinic Acid (Niacin)	-1/8	35	30B	0.8	B4	II	I	II	
Niter (Potassium Nitrate)	●	●	●	●	●	●	●	●	●
Oakite (Trisodium Phosphate)	-1/8	60	30B	1.7	B4	II	I	II	
Oats	-1/2	25-35	45	0.4	A2	I	I	I	1
Oats, rolled	-1/2	19-24	30A	0.5	A2	I	I	II	1, 7
Oxalic Acid, crystals	-1/8	60	30A	1.0	A2	I	I	III	3
Oyster Shells, ground	-1/2	53	30B	0.9	B4	II	I	II	
Oyster Shells, whole	+1/2	80	30B	2.0	B4	II	I	II	
Paper Pulp, stock	5%	62	30A	0.9	●	●	●	●	9
Paper Pulp, stock	6-15%	60-62	30A	1.2	●	●	●	●	9
Paraffine Cake, broken	-1/2	30-45	30A	0.5	A2	I	I	II	
Peanuts, shelled	-1/4	35-45	30A	0.4	A2	I	I	II	6
Peanuts, unshelled	+1/2	15-24	30A	0.6	B1	I	I	II	6
Peas, dried	-1/2	45-50	45	0.5	A2	I	I	I	1, 6
Phosphate Acid	-100M	60	30A	1.4	A2	I	I	II	
Phosphate, crushed	+1/2	75-85	30B	1.8	B4	II	I	II	
Phosphate, granular	-1/8	90-100	15	1.7	C4	III	I	II	
Phosphate of Soda (Disodium Phosphate)	-1/8	25-31	30B	0.5	B4	II	I	II	6
Phosphoprotein (Casein)	-1/8	36	30B	1.6	B4	II	I	II	
Phosphoric Acid (Phosphate Acid)	-100M	60	30A	1.4	A2	I	I	II	
Plaster of Paris (Gypsum)	-200M	60-80	30B	0.9	B4	II	I	III	2
Plumbago (Graphite)	●	●	●	●	●	●	●	●	
Polyethylene, pellets	-1/8	35	30A	0.4	A2	I	I	II	4, 6
Polystyrene, pellets	-1/8	40	30A	0.4	A2	I	I	II	4, 6
Potash (Muriate of Potash)	-1/8	77	15	1.8	D4	III	III	II	
Potassium Carbonate	-1/8	50-80	30B	1.0	B4	II	II	II	
Potassium Chloride, pellets	-1/4	120-130	30B	1.6	B4	II	II	II	
Potassium Nitrate	-1/2	76	30B	1.0	B4	II	II	I	1

Material	Maximum Particle Size (IN.)	Average Weight Per Cu.Ft.	% Loading	H.P. Factor	Component Series	Abrasiveness	Corrosiveness	Flowability	NOTE
Potassium Nitrate	-1/8	80	30A	1.2	D3	I	II	II	1
Potassium Sulfate	-1/8	42-48	30B	1.0	B4	II	I	III	8
Pumice	-1/8	40-45	15	1.6	C4	III	I	III	
Pyrite, pellets	-1/2	120-130	30B	2.0	B4	II	I	II	
Quartz	-1/8	85	15	1.8	C4	III	I	II	
Quicklime (Lime, unslaked)	●	●	●	●	●	●	●	●	
Red Lead (Lead Oxide)	-100M	150-300	30B	1.0	B4	II	I	II	2, 5
Rice, hulled or polished	-1/8	45-48	45	0.4	A2	I	I	I	
Rice, rough	-1/8	32-36	30A	0.4	A2	I	I	II	1
Rice Bran	-1/8	16-20	30A	0.4	A2	I	I	II	1, 7
Rice Grits	-1/8	42-45	30A	0.4	A2	I	I	II	
Rubber, ground	-1/8	23-50	30A	0.8	A2	I	I	III	
Rye	-1/8	44-48	45	0.4	A2	I	I	I	1
Safflower	-1/8	45	45	0.4	A2	I	I	I	1
Safflower, cake	+1/2	50	30A	0.6	B1	I	I	II	
Safflower, meal	-1/8	50	30A	0.6	A2	I	I	II	
Saffron (Safflower)	●	●	●	●	●	●	●	●	
Sal Ammoniac (Ammonium Chloride)	-1/8	52	30A	0.8	A2	I	I	II	
Salicylic Acid	-1/8	29	30A	0.6	A2	I	I	II	3
Salt, Dry Coarse	-1/4	45-50	30B	1.0	B4	II	II	II	3
Salt, Dry Fine	-1/8	70-80	30B	1.7	B4	II	II	II	3
Salt Cake (Sodium Sulfate)	-1/4	85	30B	2.1	B4	II	II	II	3
Saltpeter (Potassium Nitrate)	-1/2	76	30B	1.2	C4	II	III	I	1
Sand, damp, bank	-1/8	110-130	15	2.8	C4	III	I	III	
Sand, dry, bank	-1/8	90-110	15	1.7	C4	III	I	II	
Sand, dry silica	-1/8	90-100	15	2.0	C4	III	I	I	
Sand, foundry, prepared	-1/8	90	15	3.0	C4	III	I	III	
Sand, foundry, shakeout	+1/2	90	15	2.6	D4	III	I	II	
Sawdust, dry	-1/8	10-13	30A	0.7	A2	I	I	III	
Shale, crushed	-1/2	85-90	30B	2.0	B4	II	I	II	
Shavings, wood, dry	+1/2	8-15	30A	0.5	B1	I	I	III	7, 9
Shellac	-1/8	31	30A	0.8	A2	I	I	II	4
Silica Gel (Silicic Acid)	-1/8	45	15	1.7	B4	III	I	II	3, 6
Silicon Dioxide (Quartz)	-1/8	85	15	1.8	C4	III	I	II	
Slag, furnace	1/2	160-180	15	1.2	C4	III	I	II	
Slag, furnace	+1/2	60-65	15	2.4	D4	III	I	II	
Slaked Lime (Lime, hydrated)	●	●	●	●	●	●	●	●	
Slate, crushed	-1/2	80-90	30B	2.0	B4	II	I	II	
Slate, ground	-1/8	82	30B	1.6	B4	II	I	II	
Sludge, sewage, dried	-1/8	45-55	30B	0.5	D4	II	III	III	
Snow, fresh	-1/8	5-12	30A	0.4	A2	I	I	III	
Snow, packed	+1/2	15-35	30A	0.8	B1	I	I	III	
Soap, beads or granules	-1/4	15-35	30A	0.6	A2	I	I	II	3
Soap, chips	1/2	15-25	30A	0.4	A2	I	I	II	3
Soap, flakes	-1/8	5-20	30A	0.6	A2	I	I	II	3
Soap, powder	-1/8	20-25	30A	0.8	A2	I	I	II	
Soapstone (Talc)	-100M	40-50	30B	0.9	B4	II	I	III	2, 8
Soda Ash, heavy	-1/8	55-65	30B	1.0	B4	II	I	II	
Soda Ash, light	-100M	20-35	30B	0.8	B4	II	I	II	2, 7
Sodium Aluminate	-1/8	72	30B	1.0	B4	II	I	II	
Sodium Aluminum Fluoride (Kryolith)	●	●	●	●	●	●	●	●	
Sodium Bicarbonate	-100M	70-80	30A	1.0	A2	I	I	II	
Sodium Borate (Borax)	●	●	●	●	●	●	●	●	
Sodium Carbonate (Soda Ash)	●	●	●	●	●	●	●	●	
Sodium Chloride (Salt)	●	●	●	●	●	●	●	●	
Sodium Hydrate (Caustic Soda)	●	●	●	●	●	●	●	●	
Sodium Hydroxide (Caustic Soda)	●	●	●	●	●	●	●	●	
Sodium Nitrate	-1/8	70-80	30A	1.2	A2	I	I	II	1

Material	Maximum Particle Size (IN.)	Average Weight Per Cu.Ft.	% Loading	H.P. Factor	Component Series	Abrasiveness	Corrosiveness	Flowability	NOTE
Sodium Phosphate	-1/8	50	30B	0.6	B4	II	I	II	
Sodium Sulfate, dry	+1/2	85	30B	0.8	B4	II	I	II	
Sodium Sulfate, dry	-1/8	65-85	30B	1.0	B4	II	I	II	
Sorghum seed	-1/8	32-52	45	0.5	A2	I	I	I	
Soybeans, cracked	-1/4	30-40	30B	0.5	B4	II	I	II	1
Soybeans, whole	-1/4	45-50	15	0.4	C4	III	I	I	1
Soybean, cake	+1/2	40-43	30A	1.0	B1	I	I	II	
Soybean Flakes, raw	-1/4	20-26	30A	0.8	A2	I	I	II	7
Soybean Flakes, spent	-1/4	18-20	30A	0.6	A2	I	I	II	7
Soybean Flour	-100M	27-30	30A	0.8	A2	I	I	II	1
Soybean Meal, cold	-1/8	40	30A	0.5	A2	I	I	II	
Soybean Meal, hot	-1/8	40	30A	0.5	D3	I	II	II	
Starch	-100M	25-50	●	●	●	●	●	●	●
Steatite (Talc)	●	●	●	●	●	●	●	●	
Steel, chips, crushed	+1/2	100-150	15	1.6	D4	III	I	II	
Stibium (Antimony)	●	●	●	●	●	●	●	●	
Sugar, granulated	-1/8	50-55	30A	0.7	A2	I	I	II	4, 6
Sugar, powdered	-200M	50-60	●	●	●	●	●	●	●
Sugar, raw, cane	-1/8	55-65	30A	1.0	A2	I	I	III	8
Sugar, wet, beet	-1/8	55-65	30A	1.4	A2	I	I	III	8
Sugar Beet, pulp, dry	-1/2	12-15	●	0.9	●	II	●	II	●
Sugar Beet, pulp, wet	-1/2	25-45	●	1.2	●	I	●	II	8
Sulphur, crushed	-1/2	50-60	30A	0.8	A2	I	I	II	1
Sulphur, ground	-1/8	50-60	30A	0.6	A2	I	I	II	1, 2
Sulphur, lumps	-3	80-85	30A	0.8	B1	I	I	II	1
Taconite, pellets	+1/2	116-130	15	2.0	D4	III	I	II	6
Talc	-100M	40-60	30B	0.8	B4	II	I	III	2, 8
Talc	-1/2	80-90	30B	0.9	B4	II	I	II	
Tanbark, ground	●	55	30A	0.7	●	●	●	●	●
Titanium Dioxide (Ilmenite)	-1/8	140	15	2.0	C4	III	I	II	
Thenardite (Sodium Sulfate)	●	●	●	●	●	●	●	●	
Tobacco, scraps	+1/2	15-25	30A	0.8	B1	I	I	III	7
Tobacco, snuff	-100M	30	30B	0.9	B4	II	I	III	1, 2, 6
Tricalcium Phosphate	-100M	40-50	30A	1.6	A2	I	I	III	
Trisodium Phosphate	-1/8	60	30B	1.7	B4	II	I	II	
Tung Nut Meats, crushed	+1/2	25	30A	0.8	B1	I	I	II	
Uitaite (Bentonite)	●	●	●	●	●	●	●	●	
Vermiculite, expanded	-1/2	16	30B	0.5	B4	II	I	III	7
Vermiculite Ore	-1/2	80	30B	0.8	B4	II	I	II	
Vulcanite (Ebonite)	-1/2	65-70	30A	0.8	A2	I	I	II	
Walnut Shells, crushed	-1/8	35-40	15	1.0	B4	II	I	II	
Wheat	-1/4	45-48	45	0.4	A2	I	I	I	1
Wheat, cracked	-1/8	35-45	30A	0.4	A2	I	I	I	1
Wheat, germ	-1/8	18-28	30A	0.4	A2	I	I	I	
White Lead, dry	-100M	75-100	30B	1.0	B4	II	I	II	2, 5
Wilkinite (Bentonite)	●	●	●	●	●	●	●	●	
Wood Bark	+1/2	10-20	30B	1.2	B4	II	I	III	9
Wood Chips	+1/2	10-30	30A	0.6	B1	I	I	III	7, 9
Wood, flour	-200M	16-36	30A	0.4	A2	I	I	III	7, 8
Zinc, concentrate residue	-1/8	75-80	15	1.0	C4	III	I	II	
Zinc Oxide, heavy	-200M	30-35	30A	1.0	A2	I	I	III	2, 8
Zinc Oxide, light	-200M	10-15	30A	0.8	A2	I	I	III	2, 7, 8